

SEQUENCES

SEQ ID No:1 (Aph-1a)

MGAAVFFGCTFVAFGPAFALFLITVAGDPLRVILVAGAFFWLVSLLLASVWWFIL  
5 VHVTDNRSDARLQYGLLIFGAAVSVLLQEVFRFAYYKLLKKADEGLASLSEDGRSPI  
SIRQMAYVSGLSFGIISGVFSVINILADALGPGVVGIIHGDSPPYYFLTSAFLTAAILLH  
TFWGVVFFDACERRRYWALGLVVGSHLLTSGLTFLNPWYEASLLPIYAVTVSMGL  
WAFITAGGSLRSIQRSLLCRRQEDSRVMVYSALRIPPED

10 SEQ ID No: 2 (JUP)

EVMNLMEQPIKVTEWQQTYTYDSGIHSGANTCVPSVSSKGIMEEDEACGRQYTLK  
KTTTYTQGVPPSQGDLEYQMSTTARAKRVREAMCPCGVSGEGQLALLATQVEGQA  
TNLQRLAEPSQLLKSIVHLINYQDDAELVTRALPELTKLLNDEDPVVVTKAAMIV  
NQLSKKEASRRALMGSPQLVAAVVRTMQNTSDLDTARCTTSILHNLSSHREGLLA  
15 IFKSGGIPALVRMLSSPVESVLFYAITTLHNLLLYQEGAKMACAGRRAQKMVPLL  
NKNNPKFLAITTDCLQLLAYGNQESKLILANGGPQALVQIMRNYSYEKLLWTTSR  
VLKVLSVCPSNKPATIVEAGGMQALGKHLTSNSPRLVQNCLWTLRNLSDVATKQE  
GLESVLKILVNQLSVDDVNVLTGATGTLNLTNNNSKNKTLVTQNSGVEALIHAIL  
RAGDKDDITEPAVCALRHLSRHPEAEMAQNSVRLNYGIPAIVKLLNQPNQWPLV  
20 KATIGLIRNLALCPANHAPLQEA VIPRLVQLLVKAHQDAQRHVAAGTQQPYTDG  
VRMEEIVEGCTGALHILARDPMNRMEIFRLNTIPLFVQLLYSSVENIQRVAAGVLC  
ELAQDKEAADAIDAEGASAPLMELLHSRNEGATYAAA VLFRISEDKNPDYRKR  
SVELTNSLKFHDPAAWEAAQSMIPINEPYGDDMDATYRPMYSSDVPLDPLEMHM  
DMDGDYPIDTYSDGLRPPYPTADHMLA

25

SEQ ID No: 3 (Psen1)

MTELPAPLSYFQNAQMSEDNHLSENTVRSQNDNRERQEHNDRRSLGHPEPLSNGRP  
QGNSRQVVEQDEEEDDEELTKYGAKHVIMLFVPVTLCMVVVVATIKSVSFYTRKD  
GQLIYTPFTEDTETVGQRALHSILNAAIMISVIVVMTILLVVLYKYRCYKVIHAWLII  
30 SSLLLLFFFSFIYLGVEVFKTYNVAVDYITVALLIWNFGVVGMIHGWKGPLRLQQAY  
LIMISALMALVFIKYLPEWTAWLILAVISVYDLVAVLCPKGPLRMLVETAQERNET  
LFPALIYSSTMVWLVNMAEGDPEAQR RVSKNSKYNAESTERESQDTVAENDDGG

FSEEWEAQRDSHLGPHRSTPESRAAVQELSSSILAGEDPEERGVKLGLGDFIFYSVL  
VGKASATASGDWNTTIACFVAILIGLCLTLLLLAIFKKALPALPISITFGLVFYFATD  
YLVQPFMDQLAFHQFYI

## 5 SEQ ID No: 4 (ACAT1)

MVGEEKMSLRNRLSKSRENPEEDEDQRNPAKESLETSPNGRIDIKQLIAKKIKLTAE  
AEARLKPFPMKEVGSHFDDFVTNLIKESASLDNGGCALTTFVSLEGEKNNHRAKD  
LRAPPEQGKIFIARRSLDELLEVDHIRTYYHMFIALLLFILSTLVVDYIDEGRLVLE  
FSLLSYAFGKFPTVVTWWIMFLSTFSVPYFLFQHWATGYSSKSSHPLIRSLFHGFL  
10 FMIFQIGVLGFGPTYVVLAYTLPPASRFIIIEQIRFVMKAHSFVRENVPRVLNSAKE  
KSSTVPIPTVNQYLYFLFAPTLYRDSYPRNPTVRWGYVAMKFAQVFGCFFYVYYI  
FERLCAPLFRNIKQEPFSARVLVLCVFNSILPGVLILFLTFFAFLHCWLNFAEMLRF  
GDRMFYKDWWNSTSYSNYYRTWNVVVDWLYYYAYKDFLWFFSKRFKSAAM  
LAVFAVSAVVHEYALA VCLSFFYPVLFLFMFFGMAFNFTVND SRKKPIWNVLM  
15 WTSFLGNGVLLCFYSQEWYARQHCPLKNPTFLDYVRPRSWTCRYVF

## SEQ ID No: 5 (BRI)

MVKVTFNSALAQKEAKKDEPKSGEEALIIPDAVAVDCKDPDDVVPVGQRRRAWC  
WCMCFGLAFMLAGVILGGAYLYKYFALQPDDVYYCGIKYIKDDVILNEPSADAPA  
20 ALYQTIENIKIFEEEEVEFISVPVPEFADSDPANIVHDFNKKLTAYLDLNLDKCYVI  
PLNTSIVMPPRNLLELLINIKAGTYLPQSYLIHEHMTVDRIENIDHLGFFIYRLCHDK  
ETYKLQRRETIKGIQKREASNCFAIRHFENKFVETLICS

## SEQ ID No: 6 (calsyntenin 1)

MLRRPAPALAPAARLLLGLLGGGVWAARVNKHKWPWLEPTYHGIVTENDNTVL  
LDPPLIALDKDAPLRFAGEICGFKIHGQNVPFDAVVVDKSTGEGVIRSKEKLDCEL  
QKDYSFTIQA YDCGKGPDGTNVKKSHKATVHIQVNDVNEYAPVFKEKSYPKATVIE  
GKQYDSILRVEAVDADCSPQFSQICSYEITPDVPFTVDKDG YIKNTEKLN YGKEHQ  
YKLTVTAYDCGKKRATEDVLVKISIKPTCTPGWQGWNNRIEYEPGTGALAVFPNI  
30 HLETCDEPVASVQATVELETSHIGKGC DRD TYSEKSLHRLCGAAAGTAELLPSPSG  
SLNWTMGLPTDNGHDS DQVFEFNGTQAVRIPDGVVS VSPKEPFTISVWMRHGPF  
RKKETILCSSDKTDMNRHHYSLYVHGCRLIFLFRQDPSEEKKYRPAEFHWKLNQV

CDEEWHHYVLNVEFPSVTLYADGTSHEPFSVTEDYPLHPSKIETQLVVGACWQEF  
SGVENDNETEPVTVACAGGDLHMTQFFRGNLAGLTLRSGKLADKKVIDCLYTCK  
EGLDLQVLEDSGRGVQIQAHRSQVLTLLEGEDLGELDKAMQHISYLSNRQFPTPGI  
RRLKITSTIKCFNEATCISVPPVDGYVMVLQPEEPKISLSGVHHFARAASEFESSEGV  
5 FLFPELRIISTITREVEPEGDGAEDPTVQESLVSEEIVHDLDTCEVTVEGEELNHEQE  
SLEVDMARLQQKGIEVSSSELGMTFTGVDTMASYEEVLHLLRYRNWHARSLDR  
KFKLICSELNGRYISNEFKVEVNVIIHTANPMEHANHMAAQPQFVHPEHRSFVDLS  
GHNLANPHPFVAVHSTATVVIVVCVSSLVFMILGVFRIRAAHRRTMRDQDTGKE  
NEMDWDDSAITITVNPMEITYEDQHSSEEEEEEEEEEESEDGEEEDDITSAESESSEE  
10 EEQEQQDPQNATRQQQLEWDDSTLSY

SEQ ID No: 7 (DLK1)

MTATEALLRVLLLLLAFGHSTYGAECFPACNPQNGFCEDDNVCRCQPGWQGGLC  
DQCVTSPGCLHGLCGEPGQCICTDGWDGELCDRDVRACSSAPCANNGTCVSLDG  
15 GLYECSCAPGYSGKDCQKKDGPCVINGSPCQHGGTCVDDEGRASHASCLCPPGFS  
GNFCEIVANSCTPNPCENDGVCTDIGGDFRCRCPAGFIDKTCSRPTNCASSPCQN  
GGTCLQHTQGQAICFTILGVLTSLVVLGTVGIVFLNKCETWVSNLRYNHMLRKKK  
NLLLQYNSGEDLAVNIIFPEKIDMTTFSKEAGDEEI

20 SEQ ID No: 8 (DSCD75)

MLGLLVALLALGLAVFALLDVWYLVRLPCAVLRARLLQPRVRDLLAEQRFPGRV  
LPSDLDLLLHMNNARYLREADFARVAHLTRCGVLGALRELRAHTVLAASCARHR  
RSLRLLEPFVVRTRLLGWDDRAFYLEARFVSLRDGFVCALLRFRQHLLGTSPERVV  
QHLCQRRVEPPELPADLQHWISYNEASSQLLRMESGLSDVTKDQ

25

SEQ ID No:9 (Nicastrin)

MATAGGGSGADPGSRGLLRLLSFCVLLAGLCRGNSVERKIYIPLNKTAPCVRLNNA  
THQIGCQSSISGDTGVIHVVEKEEDLQWVLTGPNPPYMVLLSKHFTRDLMEKL  
KGRTSRIAGLAVSLTKPSPASGFSPSVQCPNDGFGVYSNSYGPEFAHCREIQWNSL  
30 GNGLAYEDFSFPIFLEDENETKVIKQCYQDHNLSQNGSAPTFFPLCAMQLFSHMHA  
VISTATCMRRSSIQSTFSINPEIVCDPLSDYNVWSMLKPINTTGTLKPDDRNVVAAT  
RLDSRSFFWNVAPGAESA VASFVTQLAAAEALQKAPDVTTLPRNVMFVFFQGETF

DYIGSSRMVYDMEKGKFPVQLENVDSFVELGQVALRTSLELWMHTDPVSQKNES  
VRNQVEDLLATLEKSGAGVPAVILRRPNQSQPLPPSSLQRFLRARNISGVVLADHS  
GAFHNKYYQSIYDTAENINVSYPEWLSPEEDLNFVTD TAKALADVATVLGRALYE  
LAGGTNFSDTVQADPQTVTRLLYGFLIKANNSWFQSILRQDLRSYLG DGPLQHYIA  
5 VSSPTNTTYVVQYALANLTGTVVNL TREQCQDPSKVPSENKDLYEYSWVQGPLHS  
NETDRLPRCVRSTARLARALSPAFELSQWSSTEYSTWTESRWKDIRARIFLIASKEL  
ELITLTVGFGILIFSLIVTYCINAKADVLFIAPREPGAVSY

SEQ ID No:10 (Pen-2)

10 MNLERVSNEEKLNLCKRYLGGFAFLPFLWLVNIFWFFREAFVPAYTEQSQIKG  
YVWRS AVGFLFWVIVLTSWITFIQYRPRWGALGDYLSFTIPLGTP

SEQ ID No: 11 (FACL3)

MNNHVSSKPSTMKLKHTINPILLYFIHFLISLYTILTYIPFYFFSES RQEKS NR IKA KP  
15 VNSKPDSAYRSVNSLDGLASVLYPGCDTLDKVFTYAKNKFKNKRL LGTREV LNEE  
DEVQPNGKIFKKVILGQYNWLSYEDVFVRAFNFNGNLQMLGQKPKTNIAIFCETR  
AEWMIAAQACFMYNFQLVTLYATLGGPAIVHALNETEVTNIITSKELLQTKLKDIV  
SLVPRLRHITVDGKPPTWSDFPKGII VHTMAA VEALGAKAS MENQPHSKPLPSDIA  
VIMYTSGSTGLPKGVMISHSNIAGITGMAERIPELGEEDVYIGYLPLAHVLELSAEL  
20 VCLSHGCRIGYSSPQTLADQSSKIKKGSKGDT SMLKPTLMAA VPEIMDRIYKNVM  
NKVSEMSSFQRNLFILAYNYKMEQISKGRNTPLCDSFVFRKVRSLLGGNIRLLLCG  
GAPLSATTQRFMNICFCCPVGQGYGLTESAGAGTISEVWDYNTGRVGAPLVCCEI  
KLKNWEEGGYFN TDKPHPRGEILIGGQSVTMGYKNEAKTKADFSE DENGQRWL  
CTGDIGEFEPDGCLKIIDRKKDLVKLQAGEYVSLGKVEAALKNLPLVDNICAYANS  
25 YHSYVIGFVVPNQKELTELARKKGLKGTWEELCN SC EMENEVLKVLSEAAISASL  
EKFEIPVKIRLSPEPWT PETGLVTDAFKLKRKELKTHYQADIERMYGRK

SEQ ID No: 12 (FLJ10579)

MSRLGALGGARAGLGLLLGTAAGLGFLCLLYSQRWKRTQRHGRSQSLPNSLDYT  
30 QTSDPGRHVM LLRAVPGGAGDASVLPSPREGQEKVLDRLDFVLTS LVALRREVE  
ELRSSLRGLAGEIVGEVRCHMEENQRVARRRRFFPVRERSDSTGSSSVYFTASSGA  
TFTDAESEGGYTTANAESDNERDS DKESEDEGEDEVSCETVKMGRKDSL DLEEEAA

SGASSALEAGGSSGLEDVLP LLQQADELHRGDEQGKREGFQLLLNNKLVYGSRQD  
FLWRLARAYSDMCELTEEVSEKKSIALDGKEEAEEAALEKGDSEADCHLWYAVLC  
GQLAEHESIQRRIQSGFSFKEHVDKAIALQPENPMAHFLLGRWCYQVSHLSWLEK  
KTATALLESPLSATVEDALQSFLKAEELQPGFSKAGR VYISKCYRELGKNSEARW  
5 WMKLALLELPDVTKEDLAIQKDLEEELEVILRD

SEQ ID No: 13 (ITM2C)

MVKISFQPAVAGIKGDKADKASASAPAPASATEILLTPAREEQPPQHRSKRGGSVG  
GVCYLSMGMVLLMGLVFASVYTYRYFFLAQLARDNFFRCGVL YEDSLSSQVRT  
10 QMELEEDVKIYLDENYERINVPVPQFGGGDPADIIHDFQRGLTAYHDISLDKCYVIE  
LNTTIVLPPRNFWE LLMNVKRGTYLPQTYIIQEEMVVTEHVS DKEALGSFTYHLCN  
GKDTYRLRRRATRRRINKRGAKNCNAIRHFENTFVVETLICGVV

SEQ ID No:14 (Presenilin)

15 MTELPAPLSYFQNAQMSEDNHLSENTNDNRERQEHNDRRSLGHPEPLSNGRPQGNS  
RQVVEQDEEEDEELTLKYGAKHVIMLFVPVTL CMVVVVATIKSVSFYTRKDGQLI  
YTPFTEDTETVGQRALHSILNAAIMISVIVVM TILLVVL YKYRCYKVIHAWLISSLL  
LLFFFSFIYLG EVFKTYNVAVDYITVALLIWN LGVVG MISHWKGPLRLQQA YLIMI  
SALMALVF IKYLP EWTAWLILA VISVYDLVAVLC PKGPLRMLVETAQERNETLFP  
20 ALIYSSTMVWL VNMAEGDPEAQR RVSKNSKYNAESTERESQDTVAENDDGGFSE  
EWEAQRD SHLGPHRSTPESRAAVQELSSSILAGEDPEERGVKLGLGDFIFYSVLVG  
KASATASGDWNTTIACFVAILIGLCLTLLLLAIFKKALPALPISITFGLVFYFATDYL  
VQPFMDQLAFHQFYI

25 SEQ ID No:15 (Sortilin/Sort1)

MERPWGAADGLSRWPHGLGLLLLLQLLPSTLSQDRLDAPPPPAAPLPRWSGP IGV  
SWGLRAAAAGGAFPRGGRWRRSAPGEDEECGRVRDFVAKLANNTHQHVFDDL R  
GSVSLSWVG DSTGVILVLTTFHVPLVIMTFGQSKLYRSEDY GKNFKDITDLINNTFI  
RTEFGMAIGPENSGKVVLTAEVSGGSRGGRIFRSSDFAKNFVQTDLPFHPLTQMM  
30 YSPQNSDYLLALSTENGLWVSKNFGGKWE EHKAVCLAKWGS DNTIFFTTYANGS  
CKADLGALELWRTSDLGKSFKTIGVKIYSFGLGGRFLFASVMADKDTTRRIHVSTD  
QGDTWSMAQLPSVGQE QFYSLAANDDMVFMHVDEPGDTGFGTIFTSDDRGIVYS

KSLDRHLYTTTGGETDFTNVTSLRGVYITSVLSEDNSIQTMITFDQGGRWTHLRKP  
ENSECDATAKNKNECSLHHASYSISQKLNVPMAPLSEPNAVGVIAHGSVGDAISV  
MVPDVYISDDGGYSWTKMLEGPHYTYTILDSGGIIVAEHSSRPINVIKFSTDEGQCW  
QTYTFTTRDPIYFTGLASEPGARSMNISIWGFTESFLTSQWVSYTIDFKDILERNCEEK  
5 DYTIWLAHSTDPEDYEDGCILGYKEQFLRLRKSSMCQNGRDYVVTKQPSICLCSLE  
DFLCDFGYRYPENDSKCVEQPELKGHDLEFCLYGREEHLTTNGYRKIPGDKCQGG  
VNPVREVKDLKKKCTSNFLSPEKQNSKSNVPIILAIVGLMLVTVVAGVLIVKKYV  
CGGRFLVHRYSVLQQHAEANGVDGVDALDTASHTNKSGYHDDSDEDLLE

10 SEQ ID No: 16 (ITPR1)

MSDKMSSFLHIGDICSLYAEGSTNGFISTLGLVDDRCVVQPETGDLNNPPKKFRDC  
LFLCLPMNRYSAQKQFWKAAKPGANSTTDAVLLNKLHHAADLEKKQNETENRK  
LLGTVIQYGNVIQLLHLKSNKYLTVNKRLPALLEKNAMRVTLDEAGNEGSWFYIQ  
PFYKLRSIGDSVVIGDKVVLNPNVAGQPLHASSHQLVDNPGCNEVNSVNCNTSWK  
15 IVLFMKWSDNKDDILKGGDVVRLFHAEQEKFLTCDHRKKQHVFRLTTGRQSATS  
ATSSKALWEVEVVQHDPCRGGAGYWNSLFRFKHLATGHYLAAEVDPDFEEECLE  
FQPSVDPDQDASRSRLRNAQEKMVYSLVSVPEGNDISSIFELDPTTLRGGDSLVR  
NSYVRLRHLCTNTWVHSTNIPIDKEEEKPVMLKIGTSPVKEDKEAFAIVPVSPAEV  
RDLDFANDASKVLGSIAGKLEKGTITQNERRSVTKLLEDLVYFVTGGTNSGQDVL  
20 EVVFSKPNRERQKLMREQNILKQIFKLLQAPFTDCGDGPMRLLEELGDQRHAPFR  
HICRLCYRVLRRHSQQDYRKNQEYIAKQFGFMQKQIGYDVLAEEDTITALLHNNRKL  
LEKHITAAEIDTFVSLVRKNREPRFLDYLSDLCVSMNKSIPVTQELICKAVLNPTNA  
DILKETKLVLRSFEFEGVSSTGENALEAGEDEEEVWLFWRDSNKEIRSKSVRELAQD  
AKEGQKEDRDVLSYYRYQLNLFARMCLDRQYLAINESGQLDVDLILRCMSDENL  
25 PYDLRASFCRLMLMHVDRDPQEQVTPVKYARLWSEIPSEIAIDDYDSSGASKDEI  
KERFAQTMEFVEEYLRDVVCQRFPFSDKEKNKLTFEVVNLARNLIYFGFYNFSDLL  
RLTKILLAILDCVHVTTTFPISKMAKGEENKGNNDVEKLGSSNVMRSIHGVGELMT  
QVVLRGGGFLPMTMAAAPEGNVKQAEPEKEDIMVMDTKLKIEILQFILNVRLDY  
RISCLLCIFKREFDESNSQTSETSSGNSSQEGPSNVPGALDFEHIEEQAEGIFGGRKV  
30 YFHEENTPLDLDHGGRTFLRVLLHMTMHDYPPLVSGALQLLFRHFSQRQEVLQA  
FKQVQLLVTSQDVDNYKQIKQDLDQLRSIVEKSELWVYKGQGPDETMDGASGEN  
EHKKTEEGNNKPQKHESTSSYNYRVVKEILIRLSKLCVQESASVRKSRKQQQRLLR

NMGAHAVVLELLQIPYEKAEDTKMQEIMRLAHEFLQNFCAGNQQNQALLHKHIN  
LFLNPGILEAVTMQHIFMNNFQLCSEINERVVQHFVHCIETHGRNVQYIKFLQTTVK  
AEGKFIKKCQDMVMAELVNSGEDVLVFYNDRASFTLIQMMRSEDRMDENSPL  
MYHIHLVELLAVCTEGKNVYTEIKCNSLLPLDDIVRVVTHEDCIPEVKIAYINFLNH  
5 CYVDTEVEMKEIYTSNHMWKLFENFLVDICRACNNTSDRKHADSIKEYVTEIVM  
SIVTTFFSSPFSQSTTLQTRQPVFVQLLQGVFRVYHCNWLMPQSQKASVESCIRVLS  
DVAKSRAIAIPVDLDSQVNNLFLKSHSIVQKTAMNWRLSARNAARRDSVLAASRD  
YRNIIERLQDIVSALEDRLRPLVQAELSVLVDVLHRPELLFPENTDARRKCESGGFI  
CKLIKHTKQLLEENEEKLCIKVLQTLREMMTKDRGYGEKLISIDELDNAELPPAPD  
10 SENATEELEPSPLRQLEDHKRGEALRQVLVNRYYGNVRPSGRRESLTSFGNGPLS  
AGGPGKPGGGGGSGSSSMSRGEMSLAEVQCHLDKEGASNLVIDLIMNASSDRVF  
HESILLAIALLEGGNTTIQHSFFCRLTEDKKSEKFFKVIFYDRMKVAQQEIKATVTVN  
TSDLGNKKKDDEVDRDAPSRKKAKEPTTQITEEVRDQLEASAATRKAFTTFRRE  
ADPDDHYQPGEQTATADKAKDDLEMSAVITIMQPILRFLQLLCENHNRLQNFL  
15 RCQNNKTNYNLVCETLQFLDCICGSTTGGLGLLGLYINEKNVALINQTLLESLTEYC  
QGPCHENQNCIATHESNGIDIITALILNDINPLGKKRMDLVLELKAKNASKLLLAIM  
ESRHDSENAERILYNMRPKELVEVIKKAYMQGEVEFEDGENGEDGAASPRNVGH  
NIYILAHQLARHNKELQSMKPGGQVDGDEALEFYAKHTAQIEIVRLDRTMEQIVF  
PVPSICEFLTKESKLRIYYTTERDEQGSKINDFFLRSEDLFNEMNWQKKLRAQPVL  
20 YWCARNMSFWSSISFNLAVLMNLLVAFFYPFKGVRGGTLEPHWSGLLWTAMLIS  
LAIVIALPKPHGIRALIASTILRLIFSUGLQPTLFLLGAFNVCNKIIFLMSFVGNCGTFT  
RGYRAMVLDVEFLYHLLYLVICAMGLFVHEFFYSLLLFDLVYREETLLNVIKSVTR  
NGRSIILTAVLALILVYLFISIVGYLFFKDDFILEVDRLPNETAVPETGESLASEFLFSD  
VCRVESGENCSPAPREELVPAEETEQDKEHTCETLLMCIVTVLSHGLRSGGGVGD  
25 VLRKPSKEEPLFAARVIYDLLFFFMVIIIIVNLIFGVIIDTFADLRSEKQKKEEILKTT  
CFICGLERDKFDNKTVTFEHHIKEEHNMWHYLCFIVLVKVKDSTEYTGPESYVAE  
MIKERNLDWFPRMRAMSLVSSDSEGEQNELRNLQEKLESTMKLVNLSGQLSELK  
DQMTEQRKQKQORIGLLGHPPHMNVNPQQA  
30 SEQ ID No: 17 (KiDins220)  
LQLSVKMSVLISQSVINYVEEENIPALKALLEKCKDVDERNECGQTPLMIAAEQGN  
LEIVKELIKNGANCNLEDLDNWTALISASKEGHVHIVEELLKCGVNLEHRDMGGW

TALMWACYKGRTDVVELLLSHGANPSVTGLYSVYPIIWAAGRGHADIVHLLLQN  
GAKVNCSDKYGTTPLVWAARKGHLECVKHLLAMGADVDQEGANSMTALIVAV  
KGGYTQSVKEILKRNPVNLTDKDGNTALMIASKEGHTTEIVQDLLDAGTYVNIPD  
RSGDTVLI GAVRGGHVEIVRALLQKYADIDIRGQDNKTALYWAVEKGNATMVRD  
5 ILQCNPDTEICTKDGETPLIKATKMRNIEVVELLLDKGAKVSAVDKKGDTPLHIAIR  
GRSRKLAELLLRNPKDGRLLYRPNKAGETPYNIDCSHQKSILTQIFGARHLSPTETD  
GDMLGYDLYSSALADILSEPTMQPPICVGLYAQWGS GKSFLKKLEDEMKTFA GQ  
QIEPLFQFSWLIVFLTLLLCGGLGLLFAFTVHPNLGIAVSL SFLALLYIFFIVTYFGGR  
REGESWNWAWVLSTRLARHIGYLELLLKLMFVNPPPELPEQTTKALPVRFLFTDYN  
10 RLSSVGGETSLAEMIATLSDACEREFGLATRLFRVFKTEDTQGKKKWKKTCCLPS  
FVIFLFIIGCIISGITLLAIFRVDPKHLTVNAVLSIASVVGLAFVLNCR TWWQVLD SL  
LNSQRKRLHNAASKLHKLKSEGFMKVLKCEVELMARMAKTIDSFTQNQTRLVVII  
DGLDACEQDKVLQMLDTVRVLFSKGPFIAIFASDPHIIKAINQNLNSVLRDSNING  
HDYMRNIVHLPVFLNSRGLSNARKFLVTSATNGDVPCSDTTGIQEDADRRVSQNS  
15 LGEMTKLGSKTALNRRDTYRRRQMQR TITRQMSFDLTKLLVTE DWFS DISPQ TMR  
RLNIVSVTGRLLRANQISFNWDR LASWINLTEQWPYRTSWLILYLEETEGIPDQM  
TLKTIYERISKNIPTTKDVEPLLEIDGDIRNFEVFLSSRTPVLVARDVKVFLPCTVNL  
DPKLREIIADVRAAREQISIGGLAYPPLPLHEGPPRAPSGYSQPPSVCSSTS FNGPFA  
GGVVSPPQHSSYYSGMTGPQHFPYNRPF FAPYLYTPRYYPGGSQHLSRPSVK TSL  
20 PRDQNNGLEVIKEDAAEGLSSPTDSSRGSGPAPGPVLLNSLNVDAVCEKLKQIEG  
LDQSM LPQYCTTIKKANINGR VLAQCNIDELKKEMNMNFGDWHLFRSTVLEM RN  
AESHVVPEDPRFLSESSSGPAPHGEPARRASHNELPHTELSSQTPYTLNFSFEELNTL  
GLDEGAPRHSNLSWQSQTRRTPSLSSLNSQDSSIEISKLT DKVQAEYRDAYREYIA  
QMSQLEGGPGSTTISGRSSPHSTYYMGQSSSGGSIHSNLEQEKGKDSEPKPDDGRK  
25 SFLMKRGDVIDYSSSGVSTNDASPLDPITEEDEKSDQSGSKLLPGKKSSERS S L FQT  
DLKLKGSGRLRYQKLPSDEDESGTEESDNTPLLKDDKDRKAEGKVERVPKSPEHSA  
EPIRTFIKAKEYLSDALLDKKDSSDSGVRSSSESSPNHSLHNEVADDSQLEKANLIEL  
EDDSHSGKRGIPHSLSGLQDPPIARMSICSEDKKSPSECSLIASSPEENWPACQKAYN  
LNRT PSTVTLNNSAPANRANQN FDEMEGIRETSQVILRPSSSPNPTTIQENENL KSM  
30 THKRSQRSSYTRL SKDPPELHAAASSESTGFGEERESIL

SEQ ID No: 18 (MDR1)



MDLEGDRNGGAKKKNFFKLNNKSEKDKKEKKPTVSVFSMFYRYSNWLDKLYMVV  
GTLAAIIHGAGLPLMMLVFGEMTDIFANAGNLEDLMSNTNRSNDINDTGFFMNLEE  
DMTRYAYYYSGIGAGVLVAAYIQVSFWCLAAGRQIHKIRKQFFHAIMRQEIGWFD  
VHDVGELNTRLTDDVSKINEGIGDKIGMFFQSMATFFTGFIVGFTRGWKLTILVILAI  
5 SPVLGLSAAVWAKILSSFTDKELLAYAKAGAVAEVLAAIRTVIAFGGQKKELER  
YNKNLEEAKRIGIKKAITANISIGAAFLLIYASYALAFWYGTTLVLSGEYSIGQVLT  
VFFSVLIGAFSVGQASPSIEAFANARGAAYEIFKIIDNKPSIDSYSKSGHKPDNIKGN  
LEFRNVHFSYPSRKEVKILKGLNLKVQSGQTVLVGNSGCGKSTTVQLMQRLYDP  
TEGMVSVGDQDIRTINVRFLREIIGVVSQEPVLFATTIAENIRYGRENTMDEIEKA  
10 VKEANAYDFIMKLPKFDTLVGERGAQLSGGQKQRIAIARALVRNPKILLDEATS  
ALDTESEAVVQVALDKARKGRTTIVIAHRLSTVRNADVAGFDDGVIVEKGNHDE  
LMKEKGIYFKLVMTQTAGNEVELENAADESKSEIDALEMSSNDSRSSLIRKRSTRR  
SVRGSQAQDRKLSTKEALDESIPPVSFWRMKLNLTWPYFVVGVCIAINGGLQP  
AFAIIFSIIIGVFTRIDDPETKRQNSNLSLLFLALGIISFITFFLQGFTFGKAGEILTKR  
15 LRYMVFRSMLRQDVSWFDDPKNTTGALTTRLANDAAQVKGAIGSRLAVITQONIA  
NLGTGIIISFTYGWQLTLLLLAIVPIIAIAGVVEMKMLSGQALKDKKELEGAGKIAE  
AIENFRTVVSLTQEQKFEHMYAQSLQVPYRNSLRKAHIFGITFSFTQAMMYFSYAG  
CFRFGAYLVAHKLMSFEDVLLVFSVAVFGAMAVGQVSSFAPDYAKAKISAAHIIM  
IIKTPLIDSYSTEGLMPNTLEGNTFGEVVFNYPTRPDIPVLQGLSLEVKKGQTLA  
20 LVGSSGCGKSTVVQLLERFYDPLAGKVLLDGKEIKRLNVQWLRAHLGIVSQEPILF  
DCSIAENIAYGDNSRVVSQEEIVRAAKEANIHAIESLPNKYSTKVGDKGTQLSGG  
QKQRIAIARALVRQPHILLDEATSALDTESEKVVQEALDKAREGRTCIVIAHRLST  
IQNADLIVVFQNGRVKEHGTHQQLLAQKGIYFSMVSVQAGTKRQ

25 SEQ ID No: 19 (Neurotrypsin)

MTLARFVLALMLGALPEVVGFDVLNDSLHHSRHSPPAGPHYPYLPTQQRPPR  
TRPPPPLPRFPRPPRALPAQRPHALQAGHTPRPHPWGCPAGEPWVSVTDFGAPCLR  
WAEVPPFLERSPPASWAQLRGQRHNFCSRSPDGAGRPWCFYGDARGKVDWGYCD  
CRHGSVRLRGGKNEFEGTVEVYASGVWGTVCSSHWDDSDASVICHQLQLGGKGI  
30 AKQTPFSGGLIPIYWSNVRRCRGDEENILLCEKDIWQGGVCPQKMAAAVTCFSFH  
GPTFPPIRLAGGSSVHEGRVELYHAGQWGTVCDDQWDDADAEVICRQLGLSGIAK  
AWHQAYFGEKSGPVMLEVRCTGNELSIQCPKSSWGEHNCGHKEDAGVSCTPL

TDGVIRLAGGKGSHEGRLEVYYRGQWGTVCDDGWTELNTYVVCRLGFKYGKQ  
ASANHFEESTGPIWLDDVSCSGKETRFLQCSRRQWGRHDCSHREDVSIACYPGGE  
GHRLSLGFPVRLMDGENKKEGRVEVFINGQWGTICDDGWTDKDAAVICRQLGYK  
GPARARTMAYFGEGKGPIHVDNVKCTGNERSLADCIKQDIGRHNCRHSEDAGVIC  
5 DYFGKKASGNSNKESSLSSVCGLRLLHRRQKRIIGGKNSLRGGWPWQVSLRLKSSH  
GDGRLLCGATLLSSCWVLTAAHCFKRYGNSTRSYAVRVGDYHTLVPEEFEEEIGV  
QQIVIHREYRPDRSDYDIALVRLQGPEEQCARFSSHVLPACLPLWRERPQKTASNC  
YITGWGDTGRAYSRTLQQAAPLLPKRFCEERYKGRFTGRMLCAGNLHEHKRVDS  
CQGDSGGPLMCERPGEWVVYGVTSWGYGCGVKDSPGVYTKVSAFVPWIKSVT  
10 KL

SEQ ID No: 20 (PLD3)

LA VVGFGALMTQLFLWEYGDLHLFGPNQRPAPCYDPCEAVLVESIPEGLDFPNAS  
TGNPSTSQAWLGLLAGAHSSLDIASFYWTLTNNDTHTQEPSAQQGEEVLRQLQTL  
15 APKGVNVRIA VSKPSGPQPQADLQALLQSGAQVRMVDMQKLTHGVLHTKFWVV  
DQTHFYLG SANMDWRSLTQVKELGVVMYNCSC LARDLT KIFEAYWFLGQAGSSI  
PSTWPRFYDTRYNQETPMEICLNGTPALAYLASAPPPLCPSGRTPDLKALLNVVDN  
ARSFIYVAVMNYLPTLEFSHPHRFWPAIDDGLRRATYERGVKVRLLISCWGHSEPS  
MRAFLLSLAALRDNHTHSDIQVKLFVVPADAE AQARIPYARVNHNKYMVTERATYI  
20 GTSNWSGNYFTETAGTSLLV TQNGRGGLRSQLEAIFLRDWDSPYSHDLDT SADS V  
GNACRLL

SEQ ID No: 21 (RetSDR2)

MKFLLDILLLLPLLIVCSLESFVKLFIPKRRKSVTGEIVLITGAGHGIGRLTAYEFAKL  
25 KSKLVLDINKHGLEETA AKCKGLGAKVHTFVVD C SNREDIYSSAKKVKA EIGD  
VSILVNNAGVVYTSDFATQDPQIEKT FEVNVLAHFWTTKAFLPAMTKNNHGHIV  
TVASAAGHVSVPFLLAYCSSKFAAVGFHKTLTDELAALQITGVKTTCLCPNFVNT  
GFIKNPSTSLGPTLEPEEVVNRLMHGILTEQKMIFIPSSIAFLTTLERILPERFLAVLK  
RKISVKFDAVIGYKMK AQ

30

SEQ ID No:22 (APLP2)

MAATGTAAAAATGRLLLLLLVGLTAPALALAGYIEALAANAGTGFAVAEPQIAM  
FCGKLNMHVNIQTGKWEPDPTGTKSCFETKEEVLQYCQEMYPELQITNVMEANQ  
RVSIDNWCRRDKKQCKSRFVTPFKCLVGEFVSDVLLVPEKQCQFFHKERMEVCENH  
QHWHTVVKEACLTQGMTLYSYGMLLPCGVDQFHGTEYVCCPQTKIIGSVSKEEEE  
5 EDEEEEEEEDEEEDYDVYKSEFPTEADLEDFTAAVDEDEDEDEEEGEEVVEDRDY  
YYDTFKGDDYNEENPTEPGSDGTMSDKEITHDVKA VCSQEAMTGPCRAVMPRW  
YFDLSKGKCVRFIYGGCGGNRNNFESEDYCMAVCKAMIPPTPLPTNDVDVYFETS  
ADDNEHARFQKAKEQLEIRHRNRMDRVKKEWEEAELQAKNLPKAERQTLIQHFQ  
AMVKALEKEAASEKQQLVETHLARVEAMLNDRRRMALENYLAALQSDPPRPHRI  
10 LQALRRYVRAENKDR LHTRHYQHVLAVDPEKAAQMKSQVMTHLHVIEERRNQS  
LSLLYKVPYVAQEIQEEIDELLQEQRADMDQFTASISETPVDVRVSSEESSEEIPPFHP  
FHPFPALPENEDTQPELYHPMKKGGSGVGEQDGGGLIGAEKVINSKNKVDENMVID  
ETLDVKEMIFNAERVGGLEEERESVGPLREDFSLSSSALIGLLVIAVAIATVIVISLV  
MLRKRQYGTISHGIVEVDPMLTPEERHLNKMQNHGYENPTYKYLEQMQUI

15

SEQ ID No:23 (APP)

MLPGLALLLLAAWTARALEVPTDGNAGLLAEPQIAMFCGRLNMHNMNVQNGKWD  
SDPSGKTCTCIDTKEGILQYCQEVYPELQITNVVEANQPVTIQNWCKRGRKQCKTHP  
HFVIPYRCLVGEFVSDALLVPDKCKFLHQERMDVCETHLHWHTVAKETCSEKSTN  
20 LHDYGMILLPCGIDKFRGVEFVCCPLAEESDNVDSADAEEDDSDVWWGGADTDY  
ADGSEDKVVEVAEEEEVAEVEEEEADDDDEDDEDGDEVEEEEAEPEYEEATERTTSI  
ATTTTTTTTESVEEVVREVCSEQAETGPCRAMISRWFYFDVTEGKCAPFFYGGCGGN  
RNNFDTEEYCMAVCGSAMSQSLLKTTQEPLARDPVKLPTTAASTPDAVDKYLETP  
GDENEHAHFQKAKERLEAKHRERMSQVMREWEEAERQAKNLPKADKKA VIQHF  
25 QEKVESLEQEAANERQQLVETHMARVEAMLNDRRRRLALENYITALQAVPPRPRH  
VFNMLKKYVRAEQKDRQHTLKHFEHVRMVDPKKAAQIRSQVMTHLRVIYERMN  
QSLSLLYNVPAVAEEIQDEVDELLQKEQNYSDDLANMISEPRISYGNDALMPSLT  
ETKTTVELLPVNGEFSLDDLQPWHSFGADSVANTENEVEPVDPARPAADRGLTTR  
PGSGLTNIKTEEISEVKMDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGG  
30 VVIATVIVITLVMLKKKQYTSIHGVEVDAAVTPEERHLSKMQQNGYENPTYK  
FEQMQRN

SEQ ID No: 24 (SXN1)

MSGELPPNINIKEPRWDQSTFIGRANHFFTVDPRNILLTNEQLESARKIVHDYRQG  
IVPPGLTENELWRAKYTYDSAFHPDTGEKMILIGRMSAQVPMNMTITGCMMTFYR  
TTPAVLFWQWINQSFNAVNYTNRSGDAPLTVNELGTAYVSATTGAVATALGLN  
5 ALTKHVSPLIGRFVPFAAVAAANCINIPLMRQRELKVGIPVTDENGNRLGESANAA  
KQAITQVVVSRILMAAPGMAIPPFIMNTLEKKAFLKRFPWMSAPIQVGLVGFCLVF  
ATPLCCALFPQKSSMSVTSLEAELQAKIQESHPELRRVYFNKGL

SEQ ID No: 25 (SORL1)

10 MATRSSRRESRLPFLFTLVALLPPGALCEVWTQRLHGGSAPLPQDRGFLVVQGD  
RELRLWARGDARGASRADEKPLRRKRSAAALQPEPIKVYGGVSLNDSHNQMVVH  
WAGEKSNVIVALARDSLALARPKSSDVYVSYDYGKSFKKISDKLNFGLGNRSEAV  
IAQFYHSPADNKRYIFADAYAQYLWITFDFCNTLQGFSIPFRAADLLLHASKASNLLL  
GFDRSHPNKQLWKSDDFGQTWIMIQEHVKSFSWGDIDPYDKPNTIYIERHEPSGYST  
15 VFRSTDFQFSRENQEVILEEVRDFQLRDKYMFATKVVHLLGSEQQSSVQLWVSFG  
RKPMRAAQFVTRHPINEYYIADASEDQVFVCVSHSNRNTNLYISEAEGLKFSLSLE  
NVLYYSPGGAGSDTLVRYFANEPPADFHRVEGLQGVYIATLINGSMNEENMRSVI  
TFDKGGTWEFLQAPAFTGYGEKINCELSQGCSLHLAQRLSQLNLQLRRMPILSKE  
SAPGLIATGSVGKNLASKTNVYISSAGARWREALPGPHYTTWGDHGGIITAIAQ  
20 GMETNELKYSTNEGETWKTFIFSEKPVFVYGLLTEPGEKSTVFTIFGSNKENVHSW  
LILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGED  
FDRPVVVSNCSCCTREDYECDFGFKMSEDLSLEVCPDPEFSGKSYSPVPCPVGST  
YRRTRGYRKISGDTCSGGDVEARLEGELVPCPLAEENEFILYAVRKSIIYRYDLASG  
ATEQLPLTGLRAAVALDFDYEHNCLYWSDLALDVIQRLCLNGSTGQEVINSLET  
25 VEALAFEPLSQLLYWVDAGFKKIEVANPDGDFRLTIVNSSVLDRPRALVLVPQEGV  
MFWTDWGDLPKGIYRSNMDGSAA YHLVSEDVKWPNGISVDDQWIYWTDAYLEC  
IERITFSGQQRSVILDNLPHPYAIAVFKNEIYWDDWSQLSIFRASKYSGSQMEILAN  
QLTGLMDMKIFYKGKNTGSNACVPRPCSLCLPKANNRSRSCRPEDVSSSVLPSG  
DLMCDCPQGYQLKNNTCVKEENTCLRNYRCSNGNCINSIWWCDFDNDGDMMS  
30 DERNCPPTTICDLDTQFRCQESGTCIPLSYKCDLEDDCGDNSDESHCEMHQCRSDEY  
NCSSGMCIRSSWVCDGDNDCRDWSDEANCTAIYHTCEASNFQCRNGHCIPQRWA  
CDGDTDCQDGSDEDPVNCEKKCNNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCE

PLCTHFMDFVCKNRQQCLFHSMVCDGIIQCRDGSDEDAAFAGCSQDPEFHKVCDE  
FGFQCQNGVCISLIWKCDGMDDCGDYSDEANCENPTEAPNCSRYFQFRCENGHCI  
PNRWKCDREND CGDWSDEKDCGDSHILPFSTPGPSTCLPNYYRCSSGTCVMDTW  
VCDGYRDCADGSDEEACPLL ANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRC  
5 DGHQDCQDGRDEANCPTHSTLTCMSREFQCEDGEACIVLSERCDGFLDCSDESDE  
KACSELT VYKVQNLQWTADFSGDVTLTWMRPKKMPSASC VYNVYYRVVGESI  
WKTLETHSNKTNTVLKVLKPDTTYQVKVQVQCLSKAHNTNDFVTLRTPEGLPDA  
PRNLQLSLPREAEGVIVGHWAPPIHTHGLIREYIVEYSRSGSKMWASQRAASNFTET  
KNLLVNTLYTVRVAAVTSRGIGNWSDSKSITTIK GKVIPPPDIHIDSYGENYLSFTLT  
10 MESDIKVNGYVVNLFWAFDTHKQERRTLNFRGSILSHKVGNLTAHTSYEISAWAK  
TDLGDSPLAFEHVMTRGVRPPAPSLKAKAINQTA VECTWTGPRNVVYGIFYATSF  
LDLYRNPKSLTTS LHNKTVIVSKDEQYLFLVRVVVPYQGPSSDYVVVKMIPDSRLP  
PRHLHVHTGKTSVVIKWESPYDSPDQDLLYAIAVKDLIRKTDRSYKVKSRNSTV  
EYTLNKLPGGKYHIIVQLGNMSKDSSIKITTVSLSAPDALKIITENDHVLLFWKSL  
15 ALKEKHFNESRGYEIHMFD SAMNTAYLGNTTDNFFKISNLKMGHNYTFTVQARC  
LFGNQICGEPAILLYDELGSGADASATQAARSTDVAAVVVPILFLILLSLGVGFAL  
YTKHRRLQSSFTAFANSHYSSRLGSAIFSSGDDLGEDDEDAPMITGFSDDVPMVIA

SEQ ID No: 26 (SPC18)

20 MLSLDFLDDVRRMNKRQLYYQVLNFGMIVSSALMIWKGLMVITGSESPIVVVL SG  
SMEPAFH RGDLLFLTNRVEDPIRVGEIVVFRIEGREIPVHRVLKIHEKQNGHIKFLT  
KGDNNAVDDRGLYKQGQHWLEKKDVVGRARGFVPYIGIVTILMNDYPKF KYAV  
LFLGLFVLVHRE

25 SEQ ID No: 27 (SPC22)

MNTVLSRANSLFAFSLSVMAALTFGCFITTA FKDRSVPVRLHVSRI MLKNVEDFTG  
PRERSDLGFITSDITADLENIFDWNVKQLFLYLSAEYSTKNNALNQVVLWDKIVLR  
GDNPKLLLKDMKTKYFFFDDGNGLKGNRNVTLT LSWNVVPNAGILPLVTGSGHV  
SVPFPDTYEITKSY

30

SEQ ID No: 28 (SPC25)

MAAAAVQGGRSGGSGGCSGAGGASNCGTGSGRSGLLDKWKIDDKPVKIDKWDG  
SAVKNSLDDSAKKVLLEKYKYVENFGLIDGRLTICTISCFFAIVALIWDYMHFPES  
KPVLAALCVISYPLFMLSFVMMGILTYTSYKEKSIFLVAHRKDPTGMDPD DIWQLS  
SSLKRFDDKYTLKLTFISGR TKQ QREAEFTKSI AKFFDHSGTLVMDA YEPEISRLHD  
5 SLAIERKIK

SEQ ID No: 29 (stearoyl-CoA desaturase)

MPAHL LQDDISSSYTTTTTITAPPSRVLQNGGDKLETMPLYLEDDIRPDIKDDIYDP  
TYKDKEGPSPKVEYVWRN ILM SLLHLGALYGITLIPTCKFYTWLWGVFYFVSAL  
10 GITAGAHRLWSHRSYKARLPLRLFLIANTMAFQNDVYEW ARDHRAHHKFSETHA  
DPHNSRRGFFFSHV GWLLVRKHPAVKEKGSTLDLS DLEAEKLVMFQRRYYKPGL  
LMMC FILPTLVPWYFWGETFQNSVFVATFLRYAVVLNATWL VNSAAHLFGYRPY  
DKNISPREN I LVSLGAVGEGFHNYHHSFPYDYSASEYRWHINFTTFFIDCMAALGL  
AYDRKKVSKAAILARIKRTGDGNYKSG

15

SEQ ID No: 30 (TMP21)

MSGLSGPPARRGPFPLALLL FLLGPRLVL AISFHLPINSRKCLREEIHKDLLVTGAY  
EISDQSGGAGGLRSHLKITDSAGHILYSKEDATKGKFAFTTEDYDMFEVCFESKGT  
GRIPDQLVILDMKHGVEAKNYEEIAKVEKLKPLEVELRRLEDLSESI V NDFAYMKK  
20 REEEMRDTNESTNTRVLYFSIFSMFCLIGLATWQVFYLR RFFKAKK LIE

SEQ ID No: 31 (VLCAD)

MSGCGLFLRTTAAARACRGLVVSTANRRLLRTSPPVRAFAKELFLGKIKKKEVFPP  
PEVSQDELNEINQFLGPVEKFFTEEVD SRKIDQEGKIPDETLEKLKSLGLFGLQVPEE  
25 YGGLGFSNTMYSRLGEIISMDGSITVTLAAHQAI GLKG ILAGTEEQKAKYLPKLAS  
GEHIAAFCLTEPASGSDAASIRS RATLSEDKKHYILNGSKVWITNGGLANIFTVFAK  
TEVVDSDGSVKDKITAFIVERDFGGVTNGKPEDKLGIRGSNTCEVHFENTKIPVENI  
LGEVGDGFKVAMN I LNSGRFSMGSVVAGLLKR LIEMTA EYACTRKQFNKRLSEFG  
LIQEKFALMAQKAYVMESMTYLTAGMLDQPGFPDCSIEAAMVKVFSSEA AWQCV  
30 SEVLQILGGLGYTRDYPYERILRDTRILLIFEGTNEILRMYIALTGLQHAGRILTTRI  
ELKQAKVSTVMDTVGRRLRDSLGR TVDLGLTGNHGVVHPSLADSANKFEENTYC  
FGRTVETLLLRFGKTIMEEQLVLKRVANILINLYGMTAVLSRASRSIRIGLRNHDHE

VLLANTFCVEAYLQNLFSLSQLDKYAPENLDEQIKKVSQQILEKRAYICAHPLDRT  
C

SEQ ID No: 32 (YME1L1)

5 MFSLSSSTVQPQVTVPLSHLINAFTPKNTSVSLSGVSVSQNQHRDVVPEHEAPSSEP  
SLNLRDLGLSELKIGQIDQLVENLLPGFCKGKNISSHWHTSHVSAQSFFENKYGNL  
DIFSTLRSSCLYRHHSRALQSICSDLQYWPVFIQSRGFKTLKSRTRRLQSTSERLAET  
QNIAPSFVKGFLLRDRGSDVESLDKLMKTKNIPEAHQDAFKTGFAEGFLKAQALT  
QKTNDLSLRRLILFVLLFGIYGLLKNPFLSVRFRTTTGLDSA VDPVQMKNVTFE  
10 HVKGVVEEAKQELQEVVEFLKNPQKFTILGGKLPKGILLVGPPGTGKTLLARAVAG  
EADVPFYYASGSEFDEMFGVGVGASRIRNLFREAKANAPCVIFIDELDSVGGKRIESP  
MHPYSRQTINQLLAEMDGFKNPNEGVIIGATNFPEALDNALIRPGRFDMQVTVPRP  
DVKGRTEILKWYLNKIKFDQSVDPEIARGTVGFSGAELENLVNQAALKA AVDGK  
EMVTMKELEFSKDKILMGPERRSVEIDNKNKTTTAYHESGHAIAYYTKDAMPINK  
15 ATIMPRGPTLGHVSLLPENDRWNETRAQLLAQMDVSMGGRVAEELIFGTDHITTG  
ASSDFDNATKIAKRMVTKFGMSEKLGVM TYSDTGKLSPETQSAIEQEIRILLRDSY  
ERAKHILKTHAKEHKNLAEALLTYETLDAKEIQIVLEGKKLEVR

SEQ ID No: 33 (LAPTM4B)

20 MVNYAWAGRSQRKLWWRSVAVLTCKSVVRPGYRGGLQARRSTLLKTCARARA  
TAPGAMKMVAPWTRFYNSCCLCCHVRTGTILLGVWYLIINAVVLLILLSALADP  
DQYNFSSSELGGDFEFMDDANMCIAIAISLLMILICAMATYGAYKQRAAWIIPFFC  
YQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVNPTCLVLILLFISIL  
TFKGYLISCVWNCYRYINGRNSSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPP  
25 PYVSA

SEQ ID No: 34 (S100alpha)

MGSELETAMETLINVFHAHSGKEGDKYKLSKKELKELLQTELSGFLDAQKD VDA  
VDKVMKELDENG DGEVDFQEYVVLVAALT VACNNFFWENS

30

SEQ ID No:35 (Cadherin EGF LAG seven-pass G-tpe receptor 2)

MRSPATGVPLPTPPPLLLLLLLLLLLLPPPLLGDQVGPCRSLSRGRGSSGACAPMGW  
LCPSSASNLWLYTSRCRDAGTELTGHLVPHHDGLRVWCPSEAHIPPLPAPEGCPW  
SCRLLGIGGHLSPQGKLTLP EEHPCLKAPRLRCQSCKLAQAPGLRAGERSPEESLG  
GRRKRNVNTAPQFQPPSYQATVPENQPAGTPVASLRAIDPDEGEAGRLEYTMDAL  
5 FDSRSNQFFSLDPVTGAVTTAEELDRETKSTHVFRVTAQDHGMPRRSALATLTILV  
TDTNDHDPVFEQQEYKESLRENLEVG YEVLTVRATDGDAPPNANILYRLLGSGG  
SPSEVFEIDPRSGVIRTRGPVDREEVESYQLTVEASDQGRDPGPRSTTAAVFLSVED  
DNDNAPQFSEKRYVVQVREDVTPGAPVLRVTASDRDKGSNAV VHYSIMSGNARG  
QFYLDAQTGALDVVSPLDYETTKEYTLRVRAQDGGRPPLSNVSGLVTVQVLDIND  
10 NAPIFVSTPFQATVLESVPLGYLVLHVQAIDADAGDNARLEYRLAGVGHDFPFTIN  
NGTGWISVAAELDREEVDFYSFGVEARDHGTALASASVSVTVLDVNDNNTFT  
QPEYTVRLNEDAAVGTSVTVSAVDRDAH SVITYQITSGNTRNRFSITSQSGGGLV  
SLALPLDYKLERQYVLA VTASDGTRQDTAQIVNVTDANTHRPVFQSSHYTVNV  
NEDRPAGTTVVLISATDEDTGENARITYFMEDSIPQFRIDADTGA VTTQAELDYED  
15 QVSYTLAITARDNGIPQKSDDTYLEILVNDVNDNAPQFLRDSYQGSVYEDVPPFTS  
VLQISATDRDSGLNGRVFYTFQGGDDGDGDFIVESTSGIVRTLRLRDRENV AQYVL  
RAYAVDKGMPPPARTPMEVTVTVLDVNDNPPVFEQDEFDVFVEENSPIGLAVARVT  
ATDPDEGTNAQIMYQIVEGNIPEVFQLDIFSGELTALVDLDYEDRPEYVLVIQATSA  
PLVSRATVHVRLLDNRNDNPPVLGNFEILFN NYVTNRSSSFPGGAIGRVPAHDPDISD  
20 SLTYSFERGNELSLVLLNASTGELKLSRALDNNRPLEAIMSVLVSDGVHSVTAQCA  
LRVTITDEMLTHSITLRL EDMSPERFLSPLLGLFIQAVAATLATPPDHVVVFNVQR  
DTDAPGGHILNVSLSVGQPPGPGGGPPFLPSED LQERLYLNRSLT AISAQRVLPFD  
DNICLREPCENYMRCVSVLRFDSSAPFIASSSVLFRPIHPVGGLRCRCPPGFTGDYC  
ETEVDLCYSRPCGPHGRCSREGGYTCLCRDGYTGEHCEVSARSGRCTPGVCKNG  
25 GTCVNLLVGGFKCDCPSGDFEKP YCQVTTTRSFP AHSFITFRGLRQRHFHTLALS FAT  
KERDGLLLYNGRFNEKHDFVALEVIQE QVQLTFSAGESTTTVSPFVPGGVSDGQW  
HTVQLKYYNKPLL GQTGLPQG PSEQKVA VVTVDGCDTGVALRFGSVLGNYS CAA  
QGTQGGSKKSLDLTG PLLLGVPDLPESFPVRMRQFVGCMRN LQVDSRHIDMA DF  
IANNGTVPGCPAKKNVCDSNTCHNGGT CVNQWDAFSCECPLGFGGKSCAQEMAN  
30 PQHFLGSSLVAWHGLSLPISQPWYLSLMFRTRQADGVLLQAITRGRSTITLQ LREG  
HVMLSVEGTGLQASSLRLEPGRANDGDWHHAQLALGASGGPGHAILSFDY GQQR  
AEGNLGPRLHGLHLSNITVGGIPGPAGGVARGFRGCLQGVRVSDTPEGVNSLDPSH



GESINVEQGCSLPDPCDSNPCPANSYCSNDWDSYSCSCDPGYYGDNCTNVCDLNP  
CEHQSVCTRKPSAPHGYTCECPPNYLGPYCETRIDQPCPRGWWGHPTCGPCNCDV  
SKGFDPCDNKTSGECHCKENHYRPPGSPTCLLCDCYPTGSLSRVCDPEDGQCPCKP  
GVIGRQCDRCDNPFAEVTNNGCEVNYDSCPRAIEAGIWWPRTRFGLPAAAPCPKG  
5 SFGTAVRHCDEHRGWLPPNLFNCTSITFSELKGFAERLQRNESGLDSGRSQQQLALL  
LRNATQHTAGYFGSDVKVAYQLATRLLAHESTQRGFGLSATQDVHFTEENLLRVG  
SALLDTANKRHWELIQQTEGGTAWLLQHIEAYASALAQNMRHTYLSPTTIVTPNI  
VISVVRDLKGNFAGAKLPRYEALRGEQPPDLETTVILPESVFRETTPVVRPAGPGEA  
QEPEELARRQRRHPELSQGEAVASVITYRTLGLLPHNYDPDKRSLRVKRPINTP  
10 VVSISVHDDEELLPRALDKPVTVQFRLLETEERTKPICVFWNHSILVSGTGGWSAR  
GCEVVFRNESHVSCQCNHMTSFAVLMDVSRRENGEILPLKTLTYVALGVTLAALL  
LTFFFLTLLRILRSNQHGIRRNLTAAALGLAQLVFLGQINQADLPFACTVIAILLHFLY  
LCTFSWALLEALHLYRALTEVRDVNTGPMRFYYMLGWGVPAFITGLAVGLDPEG  
YGNPDFCWLSTIYDTLIWSFAGPVAFVSMVSFLYILAAARASCAAQRQGFEEKGPV  
15 SGLQPSFAVLLLLSATWLLALLSVNSDTLLFHLYLFATCNCIQGPFFLSYVVLSEKEV  
RKALKLACSRKPSDPALTTKSTLTSSYNCPSPYADGRLYQPYGDSAGSLHSTSRS  
GKSQPSYIPFLREESALNPGQGPPGLGDPGSLFLEGQDQQHDPDTSDDSLSLEDD  
QSGSYASTHSSDSEEEEEEEEEEEAAFPGEQGWDSLLGPGAERLPLHSTPKDGGPGP  
GKAPWPGDFGTTAKESSGNGAPEERLRENGDALSREGSLGPLPGSSAQPHKGILKK  
20 KCLPTISEKSSLLRLPLEQCTGSSRGSSASEGSRGGPPPRPPPRQSLQEQLNGVMPIA  
MSIKAGTVDEDSSGSEFLFFNFLH

SEQ ID No:36 (Calsyntenin)

MLRRPAPALAPAARLLLAGLLCGGGVWAARVNKHKPWLEPTYHGIPTENDNTVL  
25 LDPLIALDKDAPLRFAESFEVTVTKEGEICGFKIHGQNVPFDAVVVDKSTGEGVIR  
SKEKLDCELQKDYSTIQAYDCGKGPDGTNVKKSHKATVHIQVNDVNEYAPVFK  
EKSYKATVIEGKQYDSILRVEAVDADCSPQFSQICSYEITPDVPFTVDKDGYYKNT  
KLNYGKEHQYKLTVTAYDCGKKRATEDVLVKISIKPTCTPGWQGWNNRIEYEPG  
TGALAVFPNIHLETCDEPVASVQATVELETSHIGKGCDRDTYSEKSLHRLCGAAAG  
30 TAELLSPSGSLNWTMGLPTDNHGDSDQVFENGTQAVRIPDGVVSVSPKEPFTIS  
VWMRHGPFGRKKETILCSSDKTDMNRHHYSLYVHGCRLIFLFRQDPSEEKKYRPA  
EFHWKLNQVCDEEWHHYVLNVEFPSVTLYVDGTSHEPFSVTEDYPLHPSKIETQL

VVGACWQEFSGVENDNETEPVTVASAGGDLHMTQFFRGNLAGLTLRSGKLADKK  
VIDCLYTCKEGLDLQVLEDSGRGVQIQAHPSQLVLTLEGEDLGELDKAMQHISYL  
NSRQFPTPGIRRLKITSTIKCFNEATCISVPPVDGYVMVLQPEEPKISLSGVHHFARA  
ASEFESSEGVFLFPELRIISTITREVEPEGDGAEDPTVQESLVSEEIVHDLDLTCEVTVE  
5 GEELNHEQESLEVDMARLQQKGIEVSSSELGMTFTGVDTMASYEEVLHLLRYRN  
WHARSLDRKFKLICSELNGRYISNEFKVEVNVIIHTANPMEHANHMAAQPQFVHP  
EHRSFVDLSGHNLANPHFPAVVPSTATVVIVVCVSFLVFMILGVFRIRAAHRRTM  
RDQDTGKENEMDWDDSAITVNPMEYEDQHSSEEEEEEEEEEESEDGEEEDDIT  
SAESESSEEEEGEQGDPQNA TRQQQLEWDDSTLSY

10

SEQ ID No: 37 (visinin-like 1)

MGKQNSKLAPEVMEDLVKSTEFNEHELKQWYKGFLKDCPSGRLNLEEFQQLYVK  
FFPYGDASKFAQHAFRTFDKNGDGTIDFREFICALSITSRGSFEQKLNWAFNMYDL  
DGDGKITRVEMLEIEAIYKMVGTVIMMKMNEDGLTPEQRVDKIFSKMDKNKDD  
15 QITLDEFKEAAKSDPSIVLLLQCDIQK

SEQ ID No: 38 (BACE1)

MAQALPWLLLWMGAGVLPAGHTQH GIRLPLRSGLGGA PLGLRLPRETDEEPEEPG  
RRGSFVEMVDNLRGKSGQGYVEMTVGSPPQTLN ILVDTGSSNFAVGAAPHPFLH  
20 RYYQRQLSSTYRDLRKG VYPYTQ GKWEGELGTDLLCGAGFPLNQSEVLASVGG  
SMIIGGIDHSLYTGSLWYTPIRREWYEVIIVRVEINGQDLKMDCKEYNYDKSIVDS  
GTTNLRPLPKKVFEAAVKSIIAASSTEKFPDGFWLGEQLVCWQAGTTPWNIFPVISL  
YLMGEVTNQSFRTILPQQYL RPVEDVATSQDDCYKFAISQSSTGTVMGAVIMEGF  
YVVFDRARKRIGFAVSACHVHDEFRTAAVEGPFVTLDMEDCGYNIPQTDESTLMT  
25 IAYVMAAICALFMLPLCLMVCQWRCLRCLRQQHDDFADDISLLK

SEQ ID No: 39 (CELSR2)

MRSPATGVPLPTPPPLLLLLLLLLLPPPLLGDQVGPCRSLSRGRGSSGACAPMGW  
LCPSSASNLWLYTSRCRDAGTELTGHLVPHHDGLRVWCPPESEAHPLPPAPEGCP  
30 WSCRLLGIGGHLSPQGKLTLP EHPCLKAPRLRCQSCKLAQAPGLRAGERSPEESL  
GGRRKRNVTAPQFQPPSYQATVPENQPAGTPVASLRAIDPDEGEAGRLEYTMDA  
LFDSRSNQFFSLDPVTGAVTTAEELDRETKSTHVFRVTAQDHGMPRRSALATLTIL

VTDTNDHDPVFEQQEYKESLRENLEVGYEVLTVRATDGDAPPNANILYRLLEGSG  
GSPSEVFEIDPRSGVIRTRGPVDREEVESYQLTVEASDQGRDPGPRSTTAAVFLSVE  
DDNDNAPQFSEKRYVVQVREDVTPGAPVLRVTASDRDKGSNAV VHYSIMSGNAR  
GQFYLDAQTGALDVVSPLDYETTKEYTLRVRAQDGGRPPLSNVSGLVTVQVLDIN  
5 DNAPIFVSTPFQATVLESVPLGYLVLVHVQAIDADAGDNARLEYRLAGVGHDFPFTI  
NNGTGWISVAAELDREEVDFYSFGVEARDHGTALTASASVS VTVLDVNDNNPTF  
TQPEYTVRLNEDAAVGTSVVTVSAVDRDAH SVITYQITSGNTRNRFSITSQSGGGL  
VSLALPLDYKLERQYVLAVTASDGTRQDTAQIVVNVT DANTHRPVFQSSHYTVN  
VNEDRPAGTTVV LISATDEDTGENARITYFMEDSIPQFRIDADTGAVTTQAE LDYE  
10 DQVSYTLAITARDNGIPQKSDTTYLEILVNDVNDNAPQFLRDSYQGSVYEDVPPFT  
SVLQISATDRDSGLNGRVFYTFQGGDDGDGDFIVESTSGIVRTLRLRDRENV AQYV  
LRA YAVDKGMPPARTPMEVTVTVLDVNDNPPVFEQDEFDVFVEENSPIGLAVAR  
VTATDPDEGTNAQIMYQIVEGNIPEVFQLDIFSGELTALVDLDYEDRPEYVLVIQAT  
SAPLVSRATVHVRLLDNRNDNPPVLGNFEILFN NYVTNRSSSFPGGAIGRVPAHDPDI  
15 SDSLTYSFERGNELSLVLLNASTGELKLSRALDNNRPLEAIMSVLVSDGVH SVTAQ  
CALRV TITDEMLTHSITLRLLEDMSPERFLSPLLGLFIQAVAATLATPPDHV VVFN  
QRDTDAPGGHILNVSLSVGQPPGPGGGPPFLPSED LQERLYLNRSLLT AISAQRVLP  
FDDNICLREPCENYMRCVSVLRFDSSAPFIASSSVLFRPIHPVGGLRCRCPPGFTGD  
YCETEVDLCYSRPGPHGRCRSREGGYTCLCRDGYTGEHCEVSARSGRCTPGVCK  
20 NGGTCVNLLVGGFKCDCPSGDFEKPYPYCVTTTRSFP AHSFITFRGLRQRHFHTLALS  
FATKERDGLLLYNGRFNEKHDFVALEVIQE QVQLTFSAGESTTTVSPFVPGGVSDG  
QWHTVQLKYYNKPLL GQTGLPQGPEQKVA VVTVDGCDTGVALRFGSVLGNYS  
CAAQGTQGGSKKSLDLTGPLLGGVPDLPESFPVRMRQFVGCMRNLQVDSRHID  
MADFIANNGTVPGPCPAKKNVCDSENTCHNGGTCVNQWDAFSCECPLGFGGKSCAQ  
25 EMANPQHFLGSSLVAWHGLSLPISQPWYLSLMFRTRQADGVLLQAITRGRSTITLQ  
LREGHVMLSVEGTGLQASSLRLEPGRANDGDWHHAQLALGASGGPGHAILSFDY  
GQQRAEGNLGPR LHGLHLSNITVGGIPGPAGGVARGFRGCLQGVRVSDTPEGVNS  
LDPSHGESINVEQGCSLPDPCDSNPCPANSYCSNDWDSYSCSCDPGY YGDNCTNV  
CDLNPCEHQSVCTRKPSAPHGYTCECPPNYLGPYCETRIDQPCPRGWWGHPTCGP  
30 CNCDVSKGFDPDCNKTSGECHCKENHYRPPGSPTCLLCD CYPTGSLSRVCDPEDG  
QCPCKPGVIGRQCDCRCDNPFAEVT TNGCEVNYDSCPRAIEAGIWWPRTRFGLPAA  
APCPKGSFGTA VRHCDEHRGWLPPNLFNCT SITFSELKGFAERLQRNESGLDSGRS

QQLALLLRNATQHTAGYFGSDVKVAYQLATRLLAHESTQRGFGLSATQDVHFTE  
NLLRVGSALLDTANKRHWELIQQTEGGTAWLLQHYEAYASALAQNMRYTYLSPF  
TIVTPNIVISVVRDLKGNFAGAKLPRYEALRGEQPPDLETTVILPESVFRETTPPVVRP  
AGPGEAQEPEELARRQRRHPELSQGEAVASVITYRTLGLLPHNYDPDKRSLRVPK  
5 RPIINTPVVSISVHDDEELLPRALDKPVTVQFRLLETEERTKPICVFWNHSILVSGTG  
GWSARGCEVVFRNESHVSCQCNHMTSFAVLMDVSRRENGEILPLKTLTYVALGV  
TLAALLLTFFFLTLRLRSNQHGI RRNLTAALGLAQLVFL LGINQADLPFACTVIAI  
LLHFLYLCTFSWALLEALHLYRALTEVRDVNTGPMRFYYMLGWGVPAFITGLAV  
GLDPEGYGNPDFCWLSTYDTLIWSFAGPVAFVSM SVFLYTLAARASCAAQRQGF  
10 EKKGPVSGLQPSFAVLLLLSATWLLALLSVNSDTLLFH YL FATCNCIQGPFIFLSYV  
VLSKEVRKALKLACSRKPSPDPALTTKSTLTSSYNCPSPYADGRLYQPYGDSAGSL  
HSTSRSGKSQPSYIPFLLREESALNPGQGPPGLGDPGSLFLEGQDQQHDPD TDS DSD  
LSLEDDQSGSYASTHSSDSEEEEEEEEEEEA AFPGEQGWDSLLGPGAERLPLHSTPK  
DGGPGPGKAPWPGDFGTTAKESSNGAPEERLRENGDAL SREGSLGPLPGSSAQP  
15 HKGILKKKCLPTISEKSSLLRPLEQCTGSSRGSSASEGSRGGPPPRPPPRQSLQEQL  
NGVMPIAMSIKAGTVDEDSSGSEFLFFNFLH

## SEQ ID No: 40 (FADS2)

MGKGGNQGEAAEREVSVP TFSWEEIQKHNLRTDRWLVIDRKVYNITKWSIQHP  
20 GGQRVIGHYAGEDATDAFRAFH PDLEFVGKFLKPLLIGELAPEEPSQDHGKNSKIT  
EDFRALRKTAEDMNLFKTNHVFFLLLLAHIIALESIAWFTVVFYFGNGWIPTLITAFV  
LATSQAQAGWLQHDYGHLSVYRKPKWNHLVHKFVIGHLKGASANWWNHRHFQ  
HHAKPNIFHKDPDVNMLHV FVLGEWQPIEYGKKKLKYL PYNHQHEYFFLIGPPLLI  
PMYFQYQIIMTMIVHKNWVDLAWAVSY YIRFFITYIPFYGILGALLFLNFIRFLESH  
25 WFWVWTQMNHIVMEIDQEAYRDWFSSQLTATCNVEQSFFNDWFSGHLNFQIEHH  
LFPTMPRHNLHKIAPLVKSLCAKHGIEYQEKPLL RALLDIIRSLKKSGLWLDAYL  
HK

## SEQ ID No: 41 (NogoA)

30 MEDLDQSPLVSSSDSPRPQPAFKYQFVREPEDEEEEEEEEEDEDEDLEELEVLER  
TEFSELEYSEMGSFSVSPKAESA VIVANPREEIIVKNKDEEEKLVSNNILHNQQQLP  
TALTCLVKEDEVVSSEKAKDSFNEKRVA VEAPMREEYADFKPFERVWEVKDSKE

DSDMLAAGGKIESNLESKVDKKCFADSLEQTNHEKDSSESSNDDTSFPSTPEGIKDR  
SGAYITCAPFNPAATESIATNIFPLLGDPTSENKTDEKKIEEKKAQIVTEKNTSTKTS  
NPFLVAAQDSETDYVTTDNLTKVTEEVVANMPEGLTPDLVQEACESELNEVTGTR  
IA YETKMDLVQTSEVMQESLYPAAQLCPSFEESEATPSPVLPDIVMEAPLNSAVPS  
5 AGASVIQPSSSPLEASSVNYESIKHEPENPPPYEEAMSVSLKKVSGIKEEIKEPENIN  
AALQETEAPYISIACDLIKETKLSAEPAPDFSDYSEMAKVEQPVPDHSELVEDSSPD  
SEPVDLFSDDSDIPDVPQKQDETVM LVKESLTETSFESMIEYENKEKLSALPPEGGKP  
YLESFKLSLDNTKDTLLPDEVSTLSKKEKIPLQMEELSTAVYSNDDLFISKEAQIRE  
TETFSDDSSPIEIDDEFPTLISSKTDSFSKLAREYTDLEVSHKSEIANAPDGAGSLPCTEL  
10 PHDLSLKNIQPKVEEKISFSDDFSKNGSATS KVL LPPDV SALATQAEIESIVKPKVL  
VKEAEKKLPDTEKEDRSPSAIFSAELSKTSVVDLLYWRDIKKTGVVFGASLFLLLS  
LTVFSIVSVTAYIALALLSVTISFRIYKGVIAIQKSDEGHPFRAYLESEVAISEELVQ  
KYSNSALGHVNCTIKELRRLFLVDDLVD SLKFAVLMWVFTYVGALFNGLTLLILA  
LISLFSVPVIYERHQAQIDHYLGLANKNVKDAMAKIQAKIPGLKRKAE

15

SEQ ID No: 42 (OS-9)

MAAETLLSSLLGLLLLG LLLPASLTGGVGS LNLEELSEMRYGIEILPLPVMGGQSQS  
SDVVIVSSKYKQRYECRLPAGAIHFQREREETPAYQGPGIPELLSPMRDAPCLLKT  
KDWWTYEFCYGRHIQQYHMEDSEIKGEVLYLGYYQSAFDWDDetakaskQHRL  
20 KRYHSQTYGNGSKCDLNGRPREAEVRFLCDEGAGISGDYIDRVDEPLSCSYVLTIR  
TPRLCPHPLL RPPPSAAPQAILCHPSLQPEEYMA YVQRQAVDSKQYGDKIEELQDL  
GPQVWSETKSGVAPQKMAGASPTKDDSKDSDFWKMLNEPEDQAPGGEEVPAEE  
QDPSPEAADSASGAPNDFQNNVQVKVIRSPADLIRFIEELKGGTKKGKPNIGQEQP  
VDDAAEVPQREPEKERGDPERQREMEEEDEDEDEDEDERQLLGEFEKELEGIL  
25 LPSDRDLRLSEVKAGMERELENIIQEASPALPPTTEKELDPDGLKKESERDRAMLAL  
TSTLNKLIKRL EEEKQSPELVKKHKKKR VVPKKPPSPQPTTEEDPEHRVRVRVTKLR  
LGGPNQDLTVLEMKREN PQLKQIEGLVKELLEREGLTAA GKIEIKIVRPWAEGTEE  
GARWLTD E DTRNLKEIFFNILVPGAEEAQKERQRQKELESNYRRVWGSPGGEGTG  
DLDEFDF

30

SEQ ID No: 43 (PDGFRB)

MRLPGAMPALALKGELLLL SLLLLLEPQISQGLVVTTPGPELVLNVSSTFVLTCGS  
APVVWERMSQEPPQEMAKAQDGTFFSSVLTLTNL TGLDTGEYFCTHND SRGLETDE  
RKRLYIFVPDPTVGFLPNDAEELFIFLTEITEITIPCRVTDPQLVVT LHEKKGDVALP  
VPYDHQRGFGSGIFEDRSYICKTTIGDREVDSDAYYVYRLQVSSINVS VNAVQTVVR  
5 QGENTLMCIVIGNEVVNF EW TYPRKEVIGRLVEPVTD FLLDMPYHIRSILHIPS AEL  
EDSGTYTCNVTESVNDHQDEKAIN TVVESGYVRLLGEVGT LQFAELHRSRTLQV  
VFEAYPPPTVLWFKDNRTLGDSSAGEIALSTRNVSETRYVSEL TLVRVKVAEAGH  
YTMRAFHEDA EVQLSFQLQINVPVRVLELSESHPD SGEQTVRCRGRGMPQPNIWS  
ACRDLKRCPREL PPTLLGNSSEESQLETNV TYWEEEQEF EVVSTLRLQHVD RPLS  
10 VRCTLRNAV GQDTQEVTVPHSLPFKVVISAILALVVL TIISLIILIMLWQKKPRYE  
IRWKVIESVSSDGHEYTYV DPMQLPYDSTWELPRDQLVLGRTL GSGAFGQVVEAT  
AHGLSHSQATMKVAVKMLKSTAR SSEKQALMSELKIMSHL GPHLNVVNLLGACT  
KGGPIYITEYCRYGDLVDYLHRNKHTFLQHHS DKRRPPSAELYSNALPVGLPLPS  
HVSLTGESDGGYMDMSKDESVDYVPM LDMKGDVKYADIESSNYMAPYDNYVPS  
15 APERTCRATLINE SPVLSYMDLVGFSYQVANGMEFLASKNCVHRDLAARNVLICE  
GKLVKICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLS DVWSFGILL  
WEIFTLGGTPYPELPMNEQFYNAIKRGYRMAQPAHASDEIYEIMQKC WEEKFEIRP  
PFSQLVLLLERLLGEGYKKKYQQVDEEFLRSDHPAILRSQARLP GFHGLRSPLDTSS  
VLYTAVQPNEGDNDYIIPLPDPKPEVADEGP LEGSPSLASSTLNEVNTSSTISCD SPL  
20 EPQDEPEPEPQLELQVEPEPELEQLPDSGCPAPRAEAEDSFL

SEQ ID No: 44 (PTK7)

MGAARGSPARPRRLPLLSVLLLPLLGGTQTAIVFIKQPSSQDALQGR RALLRCEVE  
APGPVHVYWLLDGAPVQD TERRFAQGSSL SFAAVDRLQDSGTFQCVARDDVTGE  
25 EARSANASFNIKWIEAGPVVLKHPASEAEIQPQTQVTLRCHIDGHPRPTYQWFRDG  
TPLSDGQSNHTVSSKERNLTLRPAGPEHSGLYSCCAHSAFGQACSSQNFTLSIADES  
FARVV LAPQDVV VARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRRAT  
VFANGSLLLTQVRPRNAGIYRCIGQGQRGPP ILEATLHLAEIEDMPLFEPRVFTAGS  
EERVTC LPPKGLPEPSVWWEHAGVRLPTHGRVYQKGHELVLANIAESDAGVYTC  
30 HAANLAGQRRQDVNITVATVPSWLKKPQDSQLEEGKPGYLDCLTQATPKPTVWV  
YRNQMLISED SRFEVFKNGTLRINSVEVYDGTWYRCMSSTPAGSIEAQARVQVLE  
KLKFTPPPQPQQCMEFDKEATVPCSATGREKPTIKWERADGSSLPEWVTDNAGTL

HFARVTRDDAGNYTCLASNGPQQQIRAHVQLTVAVFITFKVEPERTTVYQGHTAL  
LQCEAQGDPKPLIQWKGKDRILDPTKLGPRMHIFQNGSLVIHDVAPEDSGRYTCIA  
GNSCNIKHTEAPLYVVDKFPVPEESEGGSPPPYKMIQTIGLSVGAAVAYIIAVLGLM  
FYCKKRCKAKRLQKQPEGEEPEMECLNGGPLQNGQPSAEIQEEVALTSLGSGPAA  
5 TNKRHSTSDKMHFPRSSLQPITTLGKSEFGEVFLAKAQGLEEGVAETLVLVKSLQS  
KDEQQQLDFRRELEMFGLNHANVVRLLGLCREAEPHYMVLEYVDLGDLDKQFLR  
ISKSKDEKLKSQPLSTKQKVALCTQVALGMEHLSNNRFVHKDLAARNCLVSAQR  
QVKVSALGLSKDVYNSEYYHFRQAWVPLRWMSPEAILEGDFSTKSDVWAFGVL  
MWEVFTHGEMPHGGQADDEVLADLQAGKARLPQPEGCPSKLYRLMQRCWALSP  
10 KDRPSFSEIASALGDSTVDSKP

SEQ ID No: 45 (UGCGL1)

MGCKGDASGACAAGALPVTGVCYKMGVLVVLTVLWLFSSVKADSKAITTSITTK  
WFSTPLLEASEFLAEDSQEKFWNFVEASQNIGSSDHDGTDYSYYHAILEAAFQFL  
15 SPLQQNLFKFCLSLRSYSATIQAQQIAADEPPPEG CNSFFSVHGKKTCESDTLEAL  
LLTASERPKPLLFGDHRYPSSNPESPVVIFYSEIGSEEF SNFHRQLISKSNAGKINY  
VFRHYIFNPRKEPVYLSGYGVELAISTEYKAKDDTQVKGTEVNTTVIGENDPIDE  
VQGFLFGKLRDLHPDLEGQLKELRKHLVESTNEMAPLKVWQLQDLSFQTAARILA  
SPVELALVVMKDLSQNFPTKARAITKTA VSSSEL RTEVEENQKYFKGTGLGQPGDS  
20 ALFINGLHMDLDTQDIFSLFDVLRNEARVMEGLHRLGIEGLSLHNVLKLNIPSEA  
DYAVDIRSPAISWVNNLEVDSRYNSWPSSLQELLRPTFPGVIRQIRKNLHNMFVIV  
DPAHETTAELMNTAEMFLSNHIPLRIGFIFVNDSEVDGMDAGVAVLRA YNYV  
AQEVDDYHAFQTLTHIYNKVRTGEKV KVEHVSVLEKKYPYVEVNSILGIDSAYD  
RNRKEARGYYEQTGVGPLPVVLFNGMPFEREQ LDPDELETITMHKILETTTFFQRA  
25 VYLGELPHDQDVVEYIMNQPNVPRINSRILTAERDYLDLTASNFFVDDYARFTI  
LDSQGKTA AVANSMNYLTKKGMSSKEIYDDSFIRPVTFWIVGDFDSPSGRQLLYD  
AIKHQKSSNNVRISMINNPAKEISYENTQISR AIWAALQTQTSNAAKNFITKMAKE  
GAAEALAAGADIAEFSVGGMDFSLFKEVFESSKMDFILSHAVYCRDVLKLLKKGQR  
AVISNGRIIGPLEDSELFNQDDFHLL ENILKTSGQKIKSHIQQLRVEEDVASDLVMK  
30 VDALLSAQPKGDPRIEYQFFEDRHS AIKLRPKEGETYFDVVA VVDPVTREARLAP  
LLL VLAQLINMNL RVFMNCQSKLS DMPLKSFYRYVLEPEISFTSDNSFAKGPIAKFL  
DMPQSPLFTLNLNTPESWMVESVRTPYDL DNTYLEEVDSVVA AEYELEYLLLEGH

CYDITTGQPPRGLQFTLGTSANPVIVDTIVMANLGYFQLKANPGA WILRLRKGRSE  
DIYRIYSHDGTDSPPDADEVVIVLNNFKSKIIKVKVQKKADMVNEDLLSDGTSENE  
SGFWDSFKWGFTGQKTEEVKQDKDDIINIFS VASGHL YERFLRIMMLS VLKNTKTP  
VKFWFLKNYLSPTFKEFIPYMANEYNFQYELVQYKWPRWLHQQTEKQRIIWGYKI  
5 LFLDVLFPPLVVDKFLFVDADQIVRTDLKELRDFNLDGAPYGYTPFCDSRREMDGY  
RFWKSGYWASHLAGRKYHISALYVVDLKKFRKLAAGDRLRGQYQGLSQDPNSLS  
NLDQDLPNNMIHQVPIKSLPQEWLWCETWCDDASKKRAKTIDLCNNPMTKEPKL  
EAAVRIVPEWQDYDQEIKQLQIRFQKEKETGALYKEKTKEPSREGPQKREEL

## 10 SEQ ID No: 46 (CtnnB1)

MATQADLMELDMAMEPDRKAAVSHWQQQSYLD SGIHSGATTTAPSLSGKGNPEE  
EDVDTSQVLYEWEQGFSSQFTQE QVADIDGQYAMTRAQRVRAAMFPETLDEGM  
QIPSTQFDAAHPTNVQRLAEPSQMLKHAVVNLINYQDDAELATRAIPELTKLLNDE  
15 DQVVVNKAAVMVHQLSKKEASRHAIMRSPQMVS AIVRTMQNTNDVETARCTAG  
TLHNLSHHREGLLAIFKSGGIPALVKMLGSPVDSVLFYAITTLHNLLLHQEGAKMA  
VRLAGGLQKMVALLNKTNVKFLAITTDCLQILAYGNQESKLILASGGPQALVNIM  
RTYTYEKLLWTTSRVLKVLSVCSSNKPAIVEAGGMQALGLHLTDPSQRLVQNCL  
WTLRNLSDAATKQEGMEGLLGTLVQLLGSDDINVVTCAAGILSNLTCNNYKNKM  
MVCQVGGIEALVRTVLRAGDREDITEPAICALRHLSRHQEAEMAQNAVRLHYGL  
20 PVVVKLLHPPSHWPLIKATVGLIRNLALCPANHAPLREQGAIPRLVQLLVRAHQDT  
QRRTSMGGTQQQFVEGVRMEEIVEGCTGALHILARDVHN RIVIRGLNTIPLFVQLL  
YSPIENIQRVAAGVLCELAQDKEAAEAIEAEGATAPLTELLHSRNEGVATYAAAVL  
FRMSSEDKPQDYKKRLSVELTSSLFRTEPMAWNETADLGLDIGAQGEPLGYRQDDP  
SYRSFHSGGYGQDALGMDPMMEHEMGGHHPGADYPVDGLPDLGHAQDLMDGL  
25 PPGDSNQLAWFDTDL

## SEQ ID No: 47 (CtnnA1)

MTAVHAGNINFKWDPKSLEIRTLAVERLLEPLVTQVTTLVNTNSKGPSNKKRGRS  
KKAHVLAASVEQATENFLEKGDKIAKESQFLKEELVVAVEDVRKQGDLMKAAAG  
30 EFADDPCSSVKRGNMVRAPALLSAVTRLLILADMADVYKLLVQLKVVEDGILKL  
RNAGNEQDLGNQYKALKPEVDKLNMAAKRQQELKDVGHRDQMAAARGILQSN  
VPILYTASQACLQHPDVAAYKANRDLIYKQLQQA VTGISNAAQATASDDASQHQ



GGGGGELAYALNNFDKQIIVDPLSFSEERFRPSLEERLESIISGAALMADSSCTRDD  
RRERIVAECNAVRQACRTC VSEYMGNAGRKERSDALNSAIDKMTKKTRDLRRQL  
RKA VMDHVSDFSLETNVPLLVLIEAAKNGNEKEVKEYAQVFREHANKLIEVANLA  
CSISNNEEGVKLVRMSASQLEAGCPQVINAATWALAPKPQSKLAQENMDLFKEQ  
5 WEKQVRVLTDAVDDITSIDDFLAVSENHILEDVNKCVIALQEKDVDGLDRTAGAI  
RGRAARVIHVVTSEMDNYEPGVYTEKVLEATKLLSNTVMPRFTEQVEAAVEALSS  
DPAQPMDENEFIDASRLVYD GIRDIRKAVLMIRTPEELDDSDFETEDFDVRSETSVQ  
TEDDQLIAGQSARAIMAQLPQEQKAKIREQVASFQEEKSKLDAEVSKWDDSGNDII  
VLAKQMCMIMMEMTDFTRGKGPLKNTSDVISAACKIAEAGSRMDKLGRTIRDHC  
10 PDSACKQDLLAYLQRIALYCHQLNICKVKAEVQNLGGELVVSNGCDTCGALQGL  
KGWPPPLCLATHWVDSAMSLIQA AKNLMNAV VQTVKASYVASTKYQKSQGMAS  
LNLPAVSMKMKAPEKKPLVKREKQDETQTKIKRASQKKHVNPVQALSEFKAMDS  
I

15 SEQ ID No: 48 (CtnnA2)

MTSATSPIILKWDPKSLEIRTLTVERLLEPLVTQVTTLVNTSNKGPSGKKKGRSKKA  
HVLAASVEQATQNFLEKGEQIAKESQDLKEELVAAVEDVRKQGETMRIASSEFAD  
DPCSSVKRGTMVRAARALLSAVTRLLILADMADV MRLLSHLKIVEEAEAVKNAT  
NEQDLANRFKEFGKKMVKLNYVAARRQQELKDPHCRDEMAAARGALKKNATM  
20 LYTASQAFLRHPDVAATRANRDYVFKQVQEALAGISNAAQATSPTDEAKGHTGIG  
ELAAALNEFDNKIILDPMTFSEARFRPSLEERLESIISGAALMADSSCTRDDRRERIV  
AECNAVRQALQDLLSEYMNNTGRKEKGDPLNIAIDKMTKKTRDLRRQLRKAVM  
DHISDFSLETNVPLLVLIEAAKSGNEKEVKEYAQVFREHANKLVEVANLAC SISNN  
EEGVKLVRMAATQIDSLCPQVINAALT LAARPQSKVAQDNMDVFKDQWEKQVR  
25 VLTEAVDDITSVDDFLSVSENHILEDVNKCVIALQEGDVDTLDRTAGAIRGRAARV  
IHINAEMENYEAGVYTEKVLEATKLLSETVMPRFAEQVEVAIEALSANVPQPFEE  
NEFIDASRLVYDGVDRDIRKAVLMIRTPEELEDSDFEQEDYDVRRGTSVQTEDDQL  
IAGQSARAIMAQLPQEEKAKIAEQVEIFHQEKSCLDAEVAKWDDSGNDIIVLAKQ  
MCMIMMEMTDFTRGKGPLKNTSDVINAACKIAEAGSRMDKLARAVADQCPDSA  
30 CKQDLLAYLQRIALYCHQLNICKVKAEVQNLGGELIVSGTGVQSTFTTFYEVD CD  
VIDGGRASQLSTHLPTCAEGAPIGSGSSDSSMLDSATSLIQA AKNLMNAVVLTVKA

SYVASTKYQKVYGTAAVNSPVVSWKMKAPEKKPLVKREKPEEFQTRVRRGSQK  
KHISPVQALSEFKAMDSF

SEQ ID No: 49 (CtnmD1)

5 MDDSEVESTASILASVKEQEAQFEKLTRALEEERRHVSAQLERVRVSPQDANPLM  
ANGTLTRRHQNGRFVGDADLERQKFSDLKLNGPQDHSLLYSTIPRMQEPGQIVE  
TYTEEDPEGAMSVVSVETSDDGTTRRTETT VKKVVKTVTTRTVQPVAMGPDGLP  
VDASSVSNNYIQT LGRDFRKNNGNGGPGPYVGQAGTATLPRNFHYPPDGYSRHYE  
DGYPGGS DNYGSLSRVTRIEERYRPSMEGYRAPSRQDVYGPQPQVRVGGSSVDLH  
10 RFHPEPYGLEDDQRSMGYDDLDYGMMSDYGTARRTGTPSDPRRRLRSYEDMIGE  
EVPSDQYYWAPLAQHERGSLASLDSLKGGPPPNWRQPELPEVIAMLGFR L DAV  
KSNAAYLQHLCYRNDKVKTDVRKLKGIPVLVGLLDHPKKEVHLGACGALKNIS  
FGRDQDNKIAIKNCDGVPALVRLLRKARDMDLTEVITGTLWNLSSHDSIKMEIVD  
HALHALTDEVIIPHSGWEREPNEDCKPRHIEWESVLTNTAGCLRNVSSESEARRK  
15 LRECDGLVDALIFIVQAEIGQKDS DSLVENCVCLLRNLSYQVHREIPQAERYQEA  
APNVANNTGPHAASCFGAKKKGKGGKPIEDPANDTVDFPKRTSPARGYELLFQPEV  
VRIYISLLKESKTPAILEASAGAIQNLCAGRWTYGRYIRSALRQEKALSAIADLLTN  
EHERVVKAASGALRNLA VDARNKELIGKHAIPNLVKNLPGGQQNSSWNFSED TVI  
SILNTINEVIAENLEAAKKLRETQGIEKLVLINKSGNRSEKEVRAAALVLQTIWGYK  
20 ELRKPLEKEGWKKSD FQVNLNNASRSQSSHSYDDSTLPLIDRNQKSDKKPDREEIQ  
MSNMGSNTKSLDNNYSTPNERGDHNRTLDRSGDLGDMEPLKGTTPLMQDEGQES  
LEEELDVLVLDDEGGQVSYP SMQKI

SEQ ID No: 50 (NCadh)

25 MCRIAGALRTLLPLLALLQASVEASGEIALCKTGFPEDVYSAVLSKDVHEGQPLL  
NVKFSNCNGKRKVQYESSPADFKVDEDGMVYAVRSFPLSSEHAKFLIYAQDKET  
QEKWQVAVKLSLKP TLTEESVKESAEEVEIVFPRQFSKHSGLHQRQKRDWVIPPIN  
LPENSRGPPFQELVRIRSDRDKNLSLRYSVTGPGADQPPTGIFIINPISGQLSVTKPLD  
REQUIARFHLRAHAVDINGNQVENPIDIVINVIDMNDNRPEFLHQVWNGTVPEGSKP  
30 GTYVMTVT AIDADDPNALNGMLRYRIVSQAPSTPSPNMFTINNETGDIITVAAGLD  
REKVQQYTLLIQATDMEGNPTYGLSNTATAVITVTDVNDNPPEFTAMTFYGEVPEN  
RVDIIVANLTVTDKDKPHTPAWNAVYRISGGDPTGRFAIQTDPN SNDGLVTVVKPI

DFETNRMFVLTVA AENQVPLAKGIQHPPQSTATVSVTVIDVNENPYFAPNPKIIRQ  
EEGLHAGTMLTTFTAQDPDRYMQQNIRYTKLSDPANWLKIDPVNGQITTIAVLDR  
ESPNVKNNIYNATFLASDNGIPMSGTGTLLQIYLLDINDNAPQVLPQEAETCETPDP  
NSINITALDYDIDPNAGPFAFDLPLSPVTIKRNWTTITRLNGDFAQLNLKIKFLEAGIY  
5 EVPIITDSGNPPKSNISILRVKVCQCDSDNGDCTDVDRIVGAGLGTGAIILLCHILLI  
LVLMFVVWMKRRDKERQAKQLLDPEDDVRDNILKYDEEGGGEEDQDYDLSQLQ  
QPDTVEPDAIKPVGIRRMDERPIHAEPQYPVRSAPHPGDIGDFINEGLKAADNDPT  
APPYDSL LVFDYEGSGSTAGSLSSLNSSSSSGGEQDYDYLNDWGPRFKKLADMYGG  
GDD

10

SEQ ID No:51 (Reelin)

MERSGWARQTFL LALLLGATLRARAAAGYYPRFSPFFFLCTHHGELEGDGEQGEV  
LISLHIAGNPTY YVPGQEYHVTISTSTFFDGLLVTGLYTSTSVQASQSIGGSSAFGFG  
IMSDHQFGNQFMCSVVASHVSHLPTTNLSFIWIAPPAGTGCVNFMATATHRGQVIF  
15 KDALAQQQLCEQGAPTDVTVHPHLAEIHSDSILRDDFDSDYHQLQLNPNIWVECNC  
ETGEQCGAIMHGNAVTFCEPYGPRELITTGLNTTTASVLQFSIGSGSCRFSYSDPSII  
VLYAKNNSADWIQLEKIRAPSNVSTIIHILYLPEDAKGENVQFQWKQENLRVGEVY  
EACWALDNILIINSAHRQVVLEDSDLPVDTGNWLFFPGATVKHSCQSDGNSIYFHG  
NEGSEFNFATTRD VDLSTEDIQEQWSEEFESQPTGWDVLGAVIGTECGTIESGLSM  
20 VFLKDGERKLCTPSMDTTGYGNLRFYFVMGGICDPGN SHENDIILYAKIEGRKEHI  
TLDTLSYSSYKVPSLVSVVINPELQTPATKFCLRQKNHQGHNRNVWAVDFFHVLP  
VLPSTM SHMIQFSINLGC GTHQPGNSVSLEFSTNHGRSWSL LHTECLPEICAGPHLP  
HSTVYSSENYSGWNRITIPNAALTRNTRIRWRQTGPILGNMWAIDNVYIGPSCL  
KFCSGRGQCTR HGCKCDPGFSGPACEMASQTFPMFISESFGSSRLSSYHNFYSIRGA  
25 EVSFGCGVLASGKALVFNKEGRRQLITSFLDSSQSRFLQFTLRLGSKSVLSTCRAPD  
QPGEGVLLHYSYDNGITWKLLEHYSYLSYHEPRIISVELPGDAKQFGIQFRWWQPY  
HSSQREDVWAIDEIIMTSVLFNSISLDFTNLVEVTQSLGFYLG NVQPYCGHDWTLC  
FTGDSKLASSMRYVETQSMQIGASYMIQFSLVMGCGQKYTPHMDN QVKLEYSTN  
HGLTWHLVQEELPSMPSCQEFTSASIYHASEFTQWRRVIVLLPQKTWSSATRFR  
30 WSQSYYYTAQDEWALDSIYIGQQCPNMC SGHGSCDHGICRCDQGYQGTECHPEAA  
LPSTIMSDFENQNGWESDWQE VIGGEIVKPEQGC GVISSGSSLYFSKAGKRQLVSW  
DLDTSWVDFVQFYIQIGGESASCNKPD SREEGVLLQYSNNGGIQWHLLAEMYFSD

FSKPRFVYLELPAAAKTPCTRFRWWQPVFSGEDYDQWAVDDIILSEKQKQIIPVIN  
PTLPQNFYEKPAFDYPMNQMSVWLMLANEGMVKNETFCAATPSAMIFGKSDGDR  
FAVTRDLTLKPGYVLQFKLNIGCANQFSSTAPVLLQYSHDAGMSWFLVKEGCYPA  
SAGKGCEGNSRELSEPTMYHTGDFFEWTRITVIPRSLASSKTRFRWQESSSQKNV  
5 PPFGLDGVYISEPCPSYCSGHGDCISGVCFCDLGYTAAQGTCSNVPNHNEMFDRF  
EGKLSPLWYKITGAQVGTGCGTLNDGKSLYFNGPGKREARTVPLDTRNIRLVQFYI  
QIGSKTSGITCIKPRTRNEGLIVQYSNDNGILWHLLRELD FMSFLEPQIISIDLPQDAK  
TPATAFRWWQPQHKGKHAQWALDDVLIGMNDSSQTGFQDKFDGSIDLQANWYRI  
QGGQVDIDCLSMDTALIFTENIGKPRYAETWDFHVSASTFLQFEMSMGCSKPFSNS  
10 HSVQLQYSLNNGKDWHLVTEECVPPTIGCLHYTESSITYTSERFQNWKRITVYLPLS  
TISPRTRFRWIQANYTVGADSWAIDNVVLASGCPWMCSGRGICDAGRCVCDRGFG  
GPYCVPVVPLPSILKDDFNGNLHPDLWPEVYGAERGNLNGETIKSGTSLIFKGEGL  
RMLISRDLDCNTMYVQFSLRFAKSTPERSHSILLQFSISGGITWHLMDEFYFPQTT  
NILFINVPLPYTAQTNATRFRLWQPYNNGKKEEIWIVDDFIIDGNNVNNPNVMLLDT  
15 FDFGPREDNWFFYPGGNIGLYCPYSSKGAPEEDSAMVFVSNEVGEHSITTRDLNVN  
ENTIIQFEINVCSTDSSSADPVRLEFSRDFGATWHLLLPLCYHSSSHVSSLCSTEHH  
PSSTYYAGTMQGWRRREVVFHFGKLHLCGSVRFRWYQGFYPAGSQPVTWAIDNVYI  
GPQCEEMCNGQGSCINGTKCICDPGYSGPTCKISTKNPDLKDDFEGQLES DRFL  
MSGGKPSRKCGILSSGNNLFFNEDGLRMLMTRDLDLSHARFVQFFMRLGCGKGVP  
20 DPRSQPVLLQYSLNGGLSWLLQEFLFSNSSNVGRYIALEIPLKARSGSTRLRWWQ  
PSENGHFYSPWVIDQILIGNISGNTVLEDDFTTLD SRKWLLHPGGTKMPVCGSTG  
DALVFIEKASTRYVVDVAVNEDSFLQIDFAASCSVTDSCYAIELEYSVDLGLSW  
HPLVRDCLPTNVECSR YHLQRILVSDTFNKWTRITLPLPPYTRSQA TRFRWHQPAP  
FDKQQTWAIDNVYIGDGCIDMCSGHGRCIQGNCVCDEQWGGLYCDDPETS LPTQ  
25 LKDNFNRAPSSQNWLTVNGGKLSTVCGAVASGMALHFSGGCSRLLVTVDLNLTN  
AEFIQFYFMYGCLITPNNRNQGV LLEYSVNGGITWNLLMEIFYDQYSKPGFVNILL  
PPDAKEIATRFRWWQPRHDGLDQNDWAIDNV LISGSADQRTVMLDTFSSAPVPQH  
ERSPADAGPVGRIAFDMFMEDKTSVNEHWLFHDDCTVERFCDSPDGVM LCGSHD  
GREVYAVTHDLTPTEGWIMQFKISVGCKVSEKIAQNQIHVQYSTDFGVSWNYLVP  
30 QCLPADPKCSGSVSQPSVFFPTKGWK RITYPLPESLVGNPVRFRFYQKYSDMQWAI  
DNFYLGPGCLDNCRGHGDCLREQCICDPGYSGPNCYLTHTLKTKFLKERFDSEEIKP  
DLWMSLEGGSTCTECGILAEDTALYFGGSTVRQAVTQDLDLRGAKFLQYWGRIGS

ENNMTSCHRPICRKEGVLLDYSTDGGITWTLLEMDYQKYISVRHDYILLPEDALT  
NTTRLRWWQPFVISNGIVVSGVERAQWALDNLIGGAENPSQLVDTFDDEGTSHE  
ENWSFYFNAVRTAGFCGNPSFHLWPNKKKDKTHNALSSRELIIQPGYMMQFKIV  
VGCEATSCGDLHSMLEYTKDARSDSWQLVQTQCLPSSSNSIGCSPFQFHEATIYN  
5 SVNSSSWKRITIQLPDHVSSSATQFRWIQKGEETEKQSWAIDHVIYIGEACPKLCSG  
HGYCTTGAICICDESFQGDDCSVFSDLPQSYIKDNFESARVTEANWETIQGGVIGSG  
CGQLAPYAHGDSLYFNGCQIRQAATKPLDLTRASKIMFVLQIGSMSQTDSCNSDLS  
GPHAVDKAVLLQYSVNNGITWHVIAQHQPDKFTQAQRVSYNVPLEARMKGVLLR  
WWQPRHNGTGHDQWALDHVEVVLVSTRKQNYMMNFSRQHGLRHFYNRRRRSL  
10 RRYF

SEQ ID No:52 (Sortilin-related receptor)

MATRSSRRESRLPFLFTLVALLPPGALCEVWTQRLHGGSAPLPQDRGFLVVQGD  
RELRLWARGDARGASRADEKPLRRKRSAAALQPEPIKVYGGQVSLNDSHNQMVVH  
15 WAGEKSNVIVALARDSLALARPSSDVYVSVDYDGKSFKKISDKLNFGLGNRSEAV  
IAQFYHSPADNKRYIFADAYAQYLWITFDNLTQGFSPFRAADLLLHASKASNLLL  
GFDRSHPNKQLWKSDDFGQTWIMIQEHVKSFSWGIDPYDKPNTIYIERHEPSGYST  
VFRSTDFQSRNQEVILEEVRDFQLRDKYMFATKVVHLLGSEQQSSVQLWVSFG  
RKPMRAAQFVTRHPINEYYIADASEDQVFVCSHNNRTNLYISEAEGKFSLSLE  
20 NVLYYSPGGAGSDTLVRYFANEPPADFHRVEGLQGVYIATLINGSMNEENMRSVI  
TFDKGGTWEFLQAPAFGTGYGEKINCELSQGCSLHLAQRLSLLNLQLRRMPILSKE  
SAPGLIATGSVGKNLASKTNVYISSAGARWREALPGPHYTTWGDHGGIITAIAQ  
GMETNELKYSTNEGETWKTFFSEKPVFVYGLLTPGEKSTVFTIFGSNKENVHSW  
LILQVNATDALGVPCCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGED  
25 FDRPVVVSNCSTREDYECDFGFKMSDLSLEVCVPDPEFSGKSYSPVPCPVGST  
YRRTRGYRKISGDTCSGGDVEARLEGELVPCPLAEENEFILYAVRKSIYRYDLASG  
ATEQLPLTGLRAAVALDFDYEHNCCLYWSDLALDVIQRLCLNGSTGQEVINSGLT  
VEALAFEPLSLLYVVDAGFKKIEVANPDGDFRLTIVNSSVLDRPRALVLVPQEGV  
MFWTDWGDLPKGIYRSNMDGSAAYHLVSEDVKWPNGISVDDQWYWTDAYLEC  
30 IERITFSGQQRSVILDNLPHPYAIAVFKNEIYWDDWSQLSIFRASKYSGSQMEILAN  
QLTGLMDMKIFYKGKNTGSNACVPRPCSLCLPKANNRSRSCRCPEDVSSSVLPSPG  
DLMCDCPQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDNDCGDMS

DERNCPTTICDLDTQFRCQESGTCIPLSYKCDLEDDCGDNSDESHCEMHQCRSDEY  
NCSSGMCIRSSWVCDGDND CRDWSDEANCTAIYHTCEASNFQCRNGHCIPQRWA  
CDGDTDCQDGSDEDPVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCE  
PLCTHFMDFVCKNRQQCLFHSMVCDGIIQCRDGSDEDAAFAGCSQDPEFHKVCDE  
5 FGFQCQNGVCISLIWKCDGMDDCGDYSDEANCENPTEAPNCSRYFQFRCENGHCI  
PNRWKCDREND CGDWSDEKDCGDSHILPFSTPGPSTCLPNYYRCSSGTCVMDTW  
VCDGYRDCADGSDEEACPLL ANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRC  
DGHQDCQDGRDEANCPTHSTLT CMSREFQCEGEACIVLSERCDGFLDCSDESDE  
KACSDELTVYKVQNLQWTADFSGDVTLTWMRPKKMPSASCVYNVYYRVVGESI  
10 WKTLETHSNKTNTVLKVLKPDTTYQVKVQVQCLSKAHNTNDFVTLRTPEGLPDA  
PRNLQLSLPREAEGVIVGHWAPPIHTHGLIREYIVEYSRSGSKMWASQRAASNFTI  
KNLLVNTLYTVRVA AVTSRGIGNWSDSKSITTIK GKVIPPPDIHIDSYGENYLSFTLT  
MESDIKVNGYVVNLFWAFDTHKQERRTLNFRGSILSHKVGNLTAHTSYEISAWAK  
TDLGDSPLAFEHVMTRGV RPPAPSLKAKAINQTA VECTWTGPRNVVYGIFYATSF  
15 LDLYRNP KSLTTS LHNKT VIVSKDEQYLFLVRVVVPYQGPSSDYVVVKMIPDSRLP  
PRHLHVHTGKTSVVIKWESPYDSPDQDLLYAIAVKDLIRKTDRSYKVKS RNSTV  
EYTLNKLEPGGKYHIIVQLGNMSKDSSIKITTVSL SAPDALKIITENDHVLLFWKSL  
ALKEKHFNESRGYIEHMFDSAMNITAYLGNTTDNFFKISNLKMGHNYTFTVQARC  
LFGNQICGEPAILLYDELGSGADASATQAARSTDVA AVVVPILFLILLSLGVGFAIL  
20 YTKHRRLQSSFTAFANSHYSSRLGSAIFSSGDDLGEDDEDAPMITGFSDDVPMVIA

SEQ ID No:53 (18 kDa microsomal signal peptidase subunit)

MLSLDFLDDVRRMNKRQLYYQVLNFGMIVSSALMIWKGLMVTGSESPIVVVL SG  
SMEPAFHRGDLLFLTNRVEDPIRVGEIVVFRIEGREIPVHRVLKIHEKQNGHIKFLT  
25 KGDNNAVDDRGLYKQGQHWLEKKDVVGRARGFVPYIGIVTILMNDYPKFKYAV  
LFLGLFVLVHRE

SEQ ID No: 54 (CLGN)

HLPKQQRGGVCLGVKSKWQPKLRTGREKIINMHFQA FWLCLGLLFISINAEFMDD  
30 DVETEDFEENSEEIDVNESELSS EIKYKTPQPIGEVYFAETFD SGRLAGWVLSKAKK  
DDMDEEISIIDGRWEIEELKENQVPGDRGLVLKSRAKHHAISAVLAKPFIADKPLI  
VQYEVNFQDGIDCGGAYIKLLADTDDLILENFYDKTSYIIMFGPDKCGEDYKLHFIF

RHKHPKTGVFEEKHAKPPDVDLKKFFTDKRKTHLYTLVMNPDDTFEVLVDQTVVN  
KGSLLLEDVVPPIKPPKEIEDPNDKKPEEWDERAKIPDPSAVKPEDWDESEPAQIEDS  
SVVKPAGWLDDEPKFIPDPNAEKPDWDNEDTDGEWEAPQILNPACRIGCGEWKPP  
MIDNPKYKGVWRPPLVDNPNYQGIWSPRKIPNPDYFEDDHPFLLTSFSALGLELWS  
5 MTSDIYFDNFIICSEKEVADHWAADGWRWKIMIANANKPGVLKQLMAAAEGHP  
WLWLIYLVTAGVPIALITSFCWPRKVKKKHKDTEYKKT DICIPQTKGVLEQEEKEE  
KAALEKPMDL EEEKKQNDGEMLEKEEESEPEEKSEEEIEIEEGQEE SNQSNKSGSED  
EMKEADESTGSGDGPIKSVRKRRVRKD

## 10 SEQ ID No:55 (ECSIT)

MSWVQATLLARGLCRAWGGTCGAALTGTSISQVPRRLPRGLHCSAAAHSSSEQSL  
VSPPEPRQRPTKALVPFEDLFGQAPGGERDKASFLQTVQKFAEHSVRKRGHIDFIY  
LALRKMREYGVERDLAVYNQLLNIFPKEVFRPRNIQRI FVHYPRQQECGIAVLEQ  
MENHGVM PNKETEFLLIQIFGRKSY PMLKL VRLKLWFFRFMNVNPFVPRDLPQD  
15 PVELAMFGLRHMEPDLSARVTIYQVPLPKDSTGAADPPQPHIVGIQSPDQQAALAR  
HNPARPVFVEGPFSLWLRNKC VYYHILRADLLPPEEREVEETPEEWNLYYPMQLD  
LEYVRSGWDNYEFDINEVEEGPVFAMCMAGAHDQATMAKWIQGLQETNPTLAQI  
PVVFRLAGSTRELQTSSAGLEEPPLPEDHQEEDDNLQRQQQGQS

## 20 SEQ ID No:56 (FLJ20342)

MPSASCDTLDDIEDIVSQEDSKPQDRHFVRKDVVPKVRRRNTQKYLQEEENSPPS  
DSTIPGIQKIWIRTWGCSHNSDGEYMAGQLAA YGYKITENASDADLWLLNSCTV  
KNPAEDHFRNSIKKAQEENKKIVLAGCVPQAQPRQDYLKGLSIIGVQQIDRVVEVV  
EETIKGHSVRLLGQKKDNGRRLGGARLDLPKIRKNPLIEIISISTGCLNACTYCKTK  
25 HARGNLASYPIDELVDRAKQSFQEGVCEIWLTS EDTGAYGRDIGTNLPTLLWKL V  
EVIPEGAMLRLGMTNPPYILEHLEEMAKILNHPRVY AFLHIPVQSASDSVLMEMKR  
EYCVADFKRVVDLKEKVPGITIATDIICGFPGETDQDFQETVKLVEEYKFPSLFIN  
QFYPRPGTPAAKMEQVPAQVKKQRTKDLSRVFHSYSPYD HKIGERQQVLVTEESF  
DSKFYVAHNQFYEQVLVPKNPAFMGKMVEVDIYESGKHFMKGQPVSDAKVYTPS  
30 ISKPLAKGEVSGLT KDFRNGLGNQLSSGSH TSAASQCDSASSRMVLPMPRLHQDC  
ALRMSVGLALLGLLFAFFVKVYN

SEQ ID No:57 (KIAA0090)

MAAEWASRFLWATLLIPAAAVYEDQVGKFDWRQQYVGKVKFASLEFSPGSKK  
LVVATEKNVIAALNSRTGEILWRHVDKGTAEGAVDAMLLHGQDVITVSNGGRIM  
RSWETNIGGLNWEITLDSGSFQALGLVGLQESVR YIAVLKKTTLALHHLSSGHLK  
5 WVEHLPESDSIHYQM VYSY GSGV VVALGVVPFSHVNI VKFNVEDGEIVQQVRVS  
TPWLQHL SGACGVVDEAVLVCPDPSSRSLQTLALET EWELRQIPLQSLDLEFGSGF  
QPRVLPTQPNPV DASAQFFLHLSPSHYALLQYHYGTLSLLKNFPQTALVSFATTG  
EKTVA AVMACRNEVQKSSSSE DGSMGSFSEKSSSKDSLACFNQTYTINLYLVETG  
RRLD TTTTFSLEQSGTRPERLYIQVFLKKDDSVGYRALVQTEDHLLLFLQQLAGK  
10 VVLWSREESLA EVVCLEMVDLPLTGAQAELEGEFGKKADGLLGMFLKRLSSQLIL  
LQAWTSHLWKMFYDARKPRSQIKNEINIDTLARDEFNLQKMMVMVMTASGKLFGI  
ESSSGTILWKQYLPNVKPDSSFKLMVQRTTAHFPHPPQCTLLVKDKESGMSSLYVF  
NPIFGKWSQVAPPVLKRPILQSLLLPVMDQDYAKVLLLIDDEYKVTAFPATRNVL R  
QLHELAPSIFFYLVD AEQGRLCGYRLRKDLTTELSWELTIPPEVQRIVKVKGKRSSE  
15 HVHSQGRVMGDRSVLYKSLNP NLLAVVTESTDAHHERTFIGIFLIDGVTGRIIHSSV  
QKKAKGPVHIVHSENWVYQYWNTKARRNEFTVLELYEGTEQYNATAFSSLD RP  
QLPQVLQQSYIFPSSISAMEATITERGITSRHLLIGLPSGAILSLPKALLDPRRPEIPTE  
QSREENLIPYSPDVQIHAERFINYNQTVSRMRGIYTAPSGLESTCLVVAYGLDIYQT  
RVYPSKQFDVLKDDYDYVLISSVLFGLVFATMITKRLAQVKLLNRAWR

20

SEQ ID No:58 (NICE-3)

MASGSNWLSGVNVVLVMA YGSLVFVLLFIFVKRQIMRFAMKSRRGPHVPVGHNA  
PKDLKEEIDIRLSRVQDIKYEPQLLADDDARLLQLETQGNQSCYNYLYRMKALDAI  
RTSEIPFHSEGRHPRSLMGKNFRSYLLDLRNTSTPFGKVRKALIDTLDDGYETARY  
25 GTGVFGQNEYLR YQEALSELATAVKARIGSSQRHHQSAAKDLTQSPEVSPTTIQVT  
YLPSSQKSKRAKHFL ELKSFKDNYNTLESTL

SEQ ID No: 59 (CK2B)

MSSSEEVSWISWFCGLRGNEFFCEVDEDYIQDKFNLTGLNEQVPHYRQALDMILD  
30 LEPDEELEDNPNQSDLIEQA AEMLYGLIHARYILTNRGIAQM LEKYQQGDFGYCPR  
VYCENQPM LPIGLSDIPGEAMVKLYCPKCMDVYTPKSSRHHHTDGA YFGTGFPH  
MLFMVHPEYRPKRPANQFVPRLYGFKIHPMAYQLQLQAASNFKSPVK TIR



SEQ ID No: 60 (PTP LOC114971)

MAATALLEAGLARVLFYPTLLYTLFRGKVPGRAHRDWYHRIDPTVLLGALPLRSL  
TRQLVQDENVRGVITMNEEYETRFLCNSSQEWKRLGVEQLRLSTVDMTGIPTLDN  
5 LQKGVQFALKYQSLGQCVYVHCKAGRSRSATMVAAAYLIQVHKWSPEEAVRAIAK  
IRSYHIRPGQLDVLKEFHKQITARATKDGTFFVISK

SEQ ID No: 61 (STT3)

MTKFGFLRLSYEKQDTLLKLLLSMAAVLSFSTRLFAVLRVESVIHEFDPYFNRYRTT  
10 RFLAEEGFYKFHNWFDDRAWYPLGRIIGGTIYPGLMITSAAIYHVLHFFHITIDIRN  
VCVFLAPLFSSFTTIVTYHLTKELKDAGAGLLAAAMIAVVPGYISRSVAGSYDNEG  
IAIFCMLLTYYMWIKAVKTGSICWAAKCALAYFYMVSSWGGYVFLNLIPLHVLV  
LMLTGRFSHRIYVAYCTVYCLGTILSMQISFVGFQPVLSSEHMAAFGVFGLCQIHA  
FVDYLRSKLNPQQFEVLFRSVISLVGFVLLTVGALLMLTGKISPWTGRFYSLDPS  
15 YAKNNIPIIASVSEHQPTTWSSYYFDLQLLVFMFPVGLYYCFSNLSDARIFIIMYGV  
TSMYFSAVMVRLMLVLAPVMCILSGIGVSQVLSTYMKNLDIRPDKKSKKQDST  
YPIKNEVASGMILVMAFFLITYTFHSTWVTSEAYSSPSIVLSARGGDGSRIFDDFRE  
AYYWL RHNTPEDAKVMSWWDYGYQITAMANRTILVDNNTWNNTHISRVGQAM  
ASTEELKAYEIMRELDVSYVLVIFGGLTGYSSDDINKFLWMVRIGGSTDTGKHIKEN  
20 DYYTPTGEFRVDREGSPVLLNCLMYKMCYYRFGQVYTEAKRPPGFDRVRNAEIG  
NKDFELDVLEEA YTTEHWLVRIYKVKDLDNRGLSRT

SEQ ID No: 62 (NicAChRa3)

MGSGPLSLPLALSPPRLLLLLLLLSLLPVARASEAEHRLFERLFEDYNEIRPVANVSD  
25 PVIIHFEVMSQLVKVDEVNQIMETNLWLKQIWNDYKLKWNPSDYGGAEFMRVP  
AQKIWKPDIVLYNNAVGDQVDDKTKALLKYTG EVTWIPPAIFKSSCKIDVTYFPF  
DYQNCTMKFGSWSYDKAKIDLVLIGSSMNLKDYWESGEWAIIKAPGYKHDIKYN  
CCEEIYPDITYSLYIRRLPLFYTNLIIPCLLISFLTVLV FYLPSCDCGEKVTLCSVLLSL  
TVFLLVITETIPSTSLVIPLIGEYLLFTMIFVTL SIVITVFVLNVHYRTPTTHTMPSWV  
30 KTVFLNLLPRVMFMTRPTSNEGNAQKPRPLYGAELSNLNCFSRAESKGCKEGYPC  
QDGMCGYCHHRIKISNFSANLTRSSSESVD AVL SLSALSPEIKEAIQSVKYIAEN  
MKAQNEAKEEQKAQEIQQLKRKEKSTETSDQEPGL

SEQ ID No: 63 (SLC4A2)

MSSAPRRPAKGADSFCTPEPESLGPGTPGFPEQEEDELHRTLGVVERFEEILQEAGSR  
GGEEPGRSYGEEDFEYHRQSSHHIHHPLSTHLPPDARRRKTTPQGPGRKPRRRPGAS  
5 PTGETPTIEEGEEDEDEASEAEGARALTQPSPVSTPSSVQFFLREDDSDRKAERTS  
PSSPAPLPHQEATPRASKGAQAGTQVEEAEEAEVAVASGTAGGDDGGASGRPLPK  
AQPGRHSYNLQERRRIGSMTGAEQALLPRVPTDEIEAQTLATADLDLMKSHRFED  
VPGVRRHLVRKNAKGSTQSGREGREPGTPRARPRAPHKPHEVFVELNELLLDKN  
QEPQWRETARWIKFEEDVEEETERWGKPHVASLSFRSLLELRRTLAHGAVLLDLD  
10 QQTLPGVAHQVVEQMVISDQIKAEDRANVLRALLLKHSHPSDEKDFSFRNISAGS  
LGSLLGHHHGQGAESDPHVTEPLMGGVPETRLEVERERDVPPPAPPAGITRSKSKH  
ELKLEKIPENAEATVVLVGCVEFLSRPTMAFVRLREAVELDAVLEVPVPVRFLFL  
LLGPSSANMDYHEIGRSISTLMSDKQFHEAAYLADEREDLLTAINAFLDCSVVLPP  
SEVQGEELLRSVAHFQRQMLKKREEQGRLLPTGAGLEPKSAQDKALLQMVEAAG  
15 AAEDDPLRRTGRPFGLIRDVRRRYPHYLSDFRDALDPQCLAAVIFTYFAALSPAIT  
FGLLGEKTQDLIGVSELMSTALQGVVFCLLGAQPLL VIGFSGPLL VFEEAFFSFCS  
SNHLEYLVGRVWIGFWLVFLALLMVALEGSFLVRFVSRFTQEIFAFLISLIFIYETFY  
KLVKIFQEHPLHGCSASNSSEVDGGENMTWAGARPTLGPGNRSLAGQSGQGKPR  
GQPNTALLSLVLMAGTFFIAFFLRKFKNSRFFPGRIRRVIGDFGVPIAILIMVLVDYS  
20 IEDTYTQKLSVPSGFSVTAPEKRGWVINPLGEKSPFPVWMMVASLLPAILVFILIFM  
ETQITTLISKKERMLQKGS GFHLDLLLIVAMGGICALFGLPWLAATVRSVTHAN  
ALTVMSKAVAPGDKPKIQEVKEQRVTGLLVALLVGLSIVIGDLLRQIPLAVLFGIFL  
YMGVTSNLNGIQFYERLHLLLMPPKHHPDVTYVKKVRTLRMHLFTALQLLCLALL  
WAVMSTAASLAFPFILITVPLRMVVLTRIFTDREMKCLDANEAEPVFDEREGVDE  
25 YNEMPMPV

SEQ ID No: 64 (HIFPH3/EGLN3)

MGKGGNQGEAAREVSVPTFSWEEIQKHNLRTDRWLVIDRKVYNITKWSIQHP  
GGQRVIGHYAGEDATDAFRAFHPDLEFVGKFLKPLLIGELAPEEPSQDHGKNSKIT  
30 EDFRALRKTAEDMNLFKTNHVFFLLLLAHIALESIAWFTVFYFGNGWIPTLITAFV  
LATSQAQAGWLQHDYGHLSVYRKPKWNHLVHKFVIGHLKGASANWWNHRHFQ  
HHAKPNIFHKDPDVNMLHVFLGEWQPIEYGKKKLKYL PYNHQHEYFFLIGPPLLI

PMYFQYQIIMTMIVHKNWVDLAWAVSYYIRFFITYIPFYGILGALLFLNFIRFLESH  
WFVWVTQMNHIVMEIDQEAYRDWFSSQLTATCNVEQSFFNDWFSGHLNFQIEHH  
LFPTMPRHNHFKIAPLVKSLCAKHGIEYQEKPLLRALLDIIRSLKKSGKLWLDAYL  
HK

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SEQ ID No:65 (STX10)

MSLEDPFFVVRGEVQKAVNTARGLYQRWCELLQESAAVGREELDWTNELRNGL  
RSIEWDLEDLEETIGIVEANPGKFKLPAGDLQERKVFVERMREAVQEMKDHMVSP  
TAVAFLENNREILAGKPAAQKSPSDLLDASAVSATSRYYEEQQATQQQLIMDEQDQ  
10 QLEMVSGSIQVLKHMSGRVGEELDEQGIMLDFAFAQEMDHTQSRMDGVLRKLAK  
VSHMTSDRRQWCAIAVLVGVLLLVLILLFSL

SEQ ID No:66 (Presenilin-2)

MLTFMASDSEEEVCDERTSLMSAESPTPRSCQEGRQGPEDGENTAQWRSQENEEED  
15 GEEDPDRYVCSGVPGRPPGLEEELTLKYGAKHVIMLFVPVTLCMIVVATIKSVRF  
YTEKNGQLIYTPFTEDTPSVGQRLNLSVLNLTLMISVIVVMTIFLVVLYKYRCYKFI  
HGWLMSSMLLLFLFTYTYLGEVLKTYNVAMDYPTLLLTVWNFGAVGMVCIHWK  
GPLVLQQA YLMISALMALVFIKYLPEWSAWVILGAISVYDLVAVLCPKGPLRML  
VETAQERNEPIFPALIYSSAMVWTVGMAKLDPSSQGALQLPYDPEMEEDSYDSFG  
20 EPSYPEVFEPPLTGYPGEELEEEEEERGVKLGLGDFIFYSVLVGKAAATGSGDWNNT  
LACFVAILIGLCLTLLLLAVFKKALPALPISITFGLIFYFSTDNLVRPFMDTLASHQL  
YI

SEQ ID No:67 (Wolframin)

25 MDSNTAPLGPSCPQPPAPQPQARSRLNATASLEQERSERPRAPGPQAGPGPGVRD  
AAAPAEPPQAQHTRSRRERADGTGPTKGDMEIPFEEVLERAKAGDPKAQTEVGKHY  
LQLAGDTDEELNSCTAVDWLVLAQKQRREAVKLLRRCLADRRGITSENEREVR  
QLSSETDLERA VRKAALVMYWKLNPKKKKQVAVAELENVVGQVNEHDGGAQPG  
PVPKSLQKQRRMLERLVSSSESKNYIALDDFVEITKKYAKGVIPSSLFLQDDEDDDE  
30 LAGKSPEDLPLRLKVVKYPLHAIMEIKEYLIDMASRAGMHWLSTIIPTHHINALIFF  
FIISNLTIDFFAFFIPLVIFYLSFISMVICTLKVFQDSKAWENFRTLTDLLRFEPNLDV  
EQAEVNFGWNHLEPYAHFLLSVFFVIFSFPISKDCIPCSELA VITGFFT VTSYLSLS

THAEPYTRRALATEVTAAGLLSLLPSMPLNWPYLVKVLGQTFITVPVGHLLVVLNVSV  
PCLLYVYLLYLFFRMAQLRNFKGTYYCYLVPYLVCFMWCELSVVILLESTGLGLLR  
ASIGYFLFLFALPILVAGLALVGVLQFARWFTSLELTAKIAVTVAVCSVPLLLRWWT  
KASFSVVGMMVKSLTRSSMVKLILVWLTAIVLFCWFYVYRSEGMKVYNSTLTWQQ  
5 YGALCGPRAWKETNMARTQILCSHLEGHRVTWTGRFKYVRVTDIDNSAESAINM  
LPFFIGDWMRCLYGEAYPACSPGNTSTAEELCRLKLLAKHPCHIKKFDRYKFET  
VGMPFSSGADGSRSEEDDVT KDIVLRASSEFKSVLLSLRQGS LIEFSTILEGRLGSK  
WPVFELKAISCLNCMAQLSPTRRHVKIEHDWRSTVHGAVKFAFDFFFFPFLSAA

## 10 SEQ ID No:68 (BACE1)

MAQALPWLLLWMGAGVLPAGHTQHGIPLRSGLGGA PLGLRLPRETDEEPEEPG  
RRGSFVEMVDNLRGKSGQGYVEMTVGSPPQTLN L VDTGSSNFAVGAAPHPFLH  
RYYQRQLSSTYRDLRKGVYVPYTQGWEGELGTD LVSIPHGPNVTVRANIAAITE  
SDKFFINGSNWEGILGLAYAEIARPD DSLEPFFDSL VKQTHVPNLFSLQLCGAGFPL  
15 NQSEVLASVGGSMIIGGIDHSLYTGSLWYTPIRREWYVEVIIVRVEINGQDLKMDC  
KEYNYDKSIVDSGTTNLR L PKKVFEAAVKS IKAASSTEKFPDGFWLGEQLVCWQA  
GTPWNIFPVISLYLMGEVTNQSFRITILPQQYL R PVEDVATSQDDCYKFAISQSST  
GTVMGAVIMEGFYVVFDRARKRIGFAVSACHVHDEFRTAAVEGPFVTLDMEDCG  
YNIPQTDESTLMTIAYVMAAICALFMLPLCLMVCQWRCLRCLRQQHDDFADDISL  
20 LK

## SEQ ID No:69 (FLJ30668)

MELHYLAKKSNQADLCDARDWSSRGLPGDQADTAATRAALCCQKQCASTPRAT  
EMEGSKLSSSPASPSSSLQNSTLQPD AFPPG LLHSGNNQITAERKVCNCCSQELET  
25 FTYVDKNINLEQRNRSSPSAKGHNHGELGWENPNEWSQEAAISLISEEEDTSSE  
ATSSGKSIDYGFISAILFLVTGILLVIISYIVPREVTVD PNTVAAREMERLEKESARLG  
AHLDRCVIAGLCLLTLGGVILSCLLMMSMWKGEL YRRNRFASSKESAKLYGSFNF  
RMKTSTNENTLELSLVEEDALAVQS

## 30 SEQ ID No:70 (BSCv protein)

MSEADGLRQRRPLRPQVVTTDDDGQAPEAKDGSSFSGRVFRVTFLMLAVSLTVPLL  
GAMMLLESPIDPQPLSFKEPPLLGLV LHPNTKLRQAERLFENQLVGPESIAHIGDVM

FTGTADGRVVKLENGEIETIARFGSGPCKTRDDEPVCGRPLGIRAGPNGTLFVADA  
YKGLFEVNPWKREVKLLLSSETPIEGKNMSFVNDLTVTQDGRKIYFTDSSSKWQR  
RDYLLLVMEGTDDGRLLEYDTVTREVKVLLDQLRFPNGVQLSPAEDFVLVAETT  
MARIRRVYVSGLMKGGADLFVENMPGFPDNIRPSSSSGGYWVGMSTIRPNPGFSML  
5 DFLSERPWIKRMIFKLFSQETVMKFVPRYSLVLELSDSGAFRRSLHDPDGLVATYIS  
EVHEHDGHLYLGSFRSPFLCRLSLQAV

SEQ ID No:71 (FLJ39249)

MAPRPLGPLVLALGGAAAVLGSVLFILWKTYFGRGRERRWDRGEAWWGAEAAAR  
10 LPEWDEWDPEDEEDEEPALEELEQREVLVLGLDGAGKSTFLRVLSGKPPLEGHIPT  
WGFNSVRLPTKDFEVDLLEIGGSQNLRFYWKEFVSEVDVLVFVVD SADRLRLPWA  
RQELHKLLDKDPDLPVVVANKQDLSEAMSMGELQRELGLQ AIDNQREVFLAA  
SIAPAGPTFEETPGTVHIWKLLLELLS

15 SEQ ID No:72 (Cgl-13)

MSFLIDSSIMITSQILFFGFGWLFFMRQLFKDYEIRQYVVQVIFS VTFAFSCTMFELII  
FEILGVLNSSSRYPFWKMNLCVILLILVFMVPFYIGYFIVSNIRLLHKQRLLFSCLLW  
LTFMYFFWKLGDPPILSPKHGILSIEQLISR VGVIGVTLMALLSGFGAVNCPYTYM  
SYFLRNVTDTDILALERRLLQTMDMISSKKKRMAMARRTMFQKGEVHNKPSGFW  
20 GMIKSVTTSASGSENLTLIQQEVD ALEELSRQLFLETADLYATKERIEYSKTFKGKY  
FNFLGYFFSIYCVWKIFMATINIVFDRVGKTD PVTRGIEITVNYLGIQFDVKFWSQHI  
SFILVGIIIVTSIRGLLITLT KFFYAISSSKSSNVIVLLLAQIMGMYFVSSVLLIRMSMP  
LEYRTIITEVLGELQFNFYHRWFDVIFLVSALSSILFLYLAHKQAPEKQMAP

25 SEQ ID No:73 (ITCH)

MSDSGSQLGSMGSLTMKSQ LQITVISAKLKENKKNWFGPSPYVEVTVDGQSKKTE  
KCNNTNSPKWKQPLTVIVTPVSKLHFRVWSHQ TLKSDVLLGTAALDIYETLKSNN  
MKLEEVVVT LQLGGDKETETIGDLSICLDGLQLESEVVTNGETTCSENGVS LCLP  
RLECNSAISAHCNLCPLGLSDSPISASRVAGFTGASQND DGSRSKDETRVSTNGSD  
30 DPEDAGAGENRRVSGNNSPSLSNGGFKPSRPPRPSRPPPPTPRRPASVNGSPSATSE  
SDGSSTGSLPPTNTNTNTSE GATSGLIPLTISGGSGPRPLNPVTQAPLPPGWEQRVD  
QHGRVYYVDHVEKRTTWDRPEPLPPGWERRVDNMGR IYYVDHFTRTTTWQRPT

LESVRNYEQWQLQRSQLQGAMQQFNQRFTYGNQDLFATSQSKEFDPLGPLPPGWE  
KRTDSNGRVYFVNHNTTRITQWEDPRSQQQLNEKPLPEGWEMRFTVDGIPYFVDH  
NRRTTTTYIDPRTGKSALDNGPQIAYVRDFKAKVQYFRFWCQQLAMPQHIIKITVTR  
KTLFEDSFQQIMSFSPQDLRRRLWVIFPGEEGLDYGGVAREWFFLLSHEVLNPMYC  
5 LFEYAGKDNCLQINPASYINPDHLKYFRFIGRFIAMALFHGKFIDTGFSLPFYKRIL  
NKPVGKLDLESIDPEFYNSLIWVKENNIEECDLEMYFSVDKEILGEIKSHDLKPNGG  
NILVTEENKEEYIRMVAEWRLSRGVVEEQTAFFEGFNEILPQQYLQYFDAKELEVL  
LCGMQEIDLNDWQRHAIYRHYARTSKQIMWFWQFVKEIDNEKRMRLQLQFVTGTC  
RLPVGGFADLMGSNGPQKFCIEKVGKENWLPRSHTCFNRDLPPYKSYEQLKEKL  
10 LFAIETEFGFQE

SEQ ID No:74 (Casein kinase III beta chain)

MSSSEEVSWISWFCGLRGNEFFCEVDEDYIQDKFNLTGLNEQVPHYRQALDMILD  
LEPDEELEDNPNQSDLIEQAAEMLYGLIHARYILTNRGIAQMLEKYQQGDFGYCPR  
15 VYCENQPMPLIGLSDIPGEAMVKLYCPKCMDVYTPKSSRHHHTDGAYFGTGFPH  
MLFMVHPEYRPKRPANQFVPRLYGFKIHPMAYQLQLQAASNFKSPVKTIR

SEQ ID No:75 (Cathepsin B)

MWQLWASLCCLLVLANARSRPSFHPVSDELVNYVNKRNTTWQAGHNFYNVDMS  
20 YLKRLCGTFLGGPKPPQRMFTEDLKLPAFDAREQWPQCPTIKEIRDQGSCGSCW  
AFGAVEAISDRICHTNAHVSVEVSAEDLLTCCGSMCGDGCNGGYPAEAWNFWTR  
KGLVSGGLYESHVGCPRYSIPPCHEHVNGSRPPCTGEGDTPKCSKICEPGYSPTYK  
QDKHYGYNSYSVSNSEKDIMAIEYKNGPVEGAFSVYSDFLLYKSGVYQHVTGEM  
MGGHAIRILGWGVENGTPYWLANSWNTDWGDNGFFKILRGQDHCIESEVVAG  
25 IPRTDQYWEKI

SEQ ID No:76 (Delta-6 fatty acid desaturase)

MGKGGNQGEAAEREVSVPFTSWEEIQKHNLRTDRWLVIDRKVYNITKWSIQHP  
GGQRVIGHYAGEDATDAFRAFHDPLEFVGKFLKPLLIGELAPEEPSQDHGKNSKIT  
30 EDFRALRKTAEDMNLFKTNHVFFLLLLAHILALESIAWFTVFYFGNGWIPTLITAFV  
LATSQAQAGWLQHDYGHLSVYRKPKWNHLVHKFVIGHLKGASANWWNHRHFQ  
HHAKPNIFHKDPDVNMLHVFLGEWQPIEYGKKKLKYLPLYNHQHEYFFLIGPPLLI

PMYFQYQIIMTMIVHKNWVDLAWAVSYYIRFFITYIPFYGILGALLFLNFIRFLESH  
WVWVTQMNHIVMEIDQEAYRDWFSSQLTATCNVEQSFFNDWFSGHLNFQIEHH  
LFPTMPRHNHKKIAPLVKSLCAKHGIEYQEKPLLRALLDIIRSLKKSGKLWLDAYL  
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SEQ ID No:77 (Nogo-A)

MEDLDQSPLVSSSDSPRPQPAFKYQFVREPEDEEEEEEEEEDEDEDLEELEVLER  
KPAAGLSAAPVPTAPAAGAPLMDFGNDVPPAPRGPLPAAPPVAPERQPSWDPSP  
VSSTVPAPSPLSAAAVSPSKLPEDDEPPARPPPPPPASVSPQAEPVWTPAPAPAAPP  
10 STPAAPKRRGSSGSVDETLFALPAASEPVIRSSAENMDLKEQPGNTISAGQEDFPSV  
LLETAASLPSLSPLSAAASFKEHEYLGNLSTVLPTEGTLQENVSEASKEVSEKAKTLL  
IDRDLTEFSELEYSEMGSFSVSPKAESAIVANPREEIVKNKDEEEKLVSNNILHN  
QQELPTALTKLVKEDEVVSSEKAKDSFNEKRVAVEAPMREEYADFKPFERVWEV  
KDSKEDSDMLAAGGKIESNLESKVDDKKCFADSLEQTNHEKDSSESSNDDTSFPSTPE  
15 GIKDRSGAYTTCAPFNPAATESIATNIFPLLGDPTSENKTDEKKIEEKKAAQIVTEKNT  
STKTSNPFVLVAAQDSETDYVTTDNLTKVTEEVVANMPEGLTPDLVQEACESELNE  
VTGTKIAYETKMDLVQTSEVMQESLYPAAQLCPSFEESEATPSPVLPDIVMEAPLN  
SAVPSAGASVIQPSSSPLEASSVNYESIKHEPENPPPYEEAMSVSLKKVSGIKEEIKE  
PENINAALQETEAPYISIACDLIKETKLSAEPAPDFSDYSEMAKVEQPVPDHSELVE  
20 DSSPDSEPVDLFSDDSDIPDVPQKQDETVMMLVKESLTETSFESMIEYENKEKLSALPP  
EGGKPYLESFKLSLDNTKDTLLPDEVSTLSKKEKIPLQMEELSTAVYSNDDLFISKE  
AQIRETETFSDDSSPIEIDEFPTLISSKTDSFSKLAREYTDLEVSHKSEIANAPDGAGSL  
PCTELPHDLSLKNIQPKVEEKISFSDDFSKNGSATSKVLLLPDVSALATQAEIESIV  
KPKVLVKEAEKKLPDTEKEDRSPSAIFSAELSKTSVVDLLYWRDIKKTGVVFGAS  
25 LFLLLSLTVFSIVSVTAYIALALLSVTISFRIYKGVIAIQKSDEGHPFRAYLESEVAI  
SEELVQKYSNSALGHVNCTIKELRRLFLVDDLVDLSLKFAVLMWVFTYVGALFNGL  
TLLILALISLFSVPVIYERHQAQIDHYLGLANKNVKDAMAKIQAKIPGLKRKAE

SEQ ID No:78 (PDGFRB)

30 MRLPGAMPALALKGELLLL SLLLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCGS  
APVVWERMSQEPPQEMAKAQDGTFSVLTLTNLTGLDTGEYFCTHNDSRGLETDE  
RKRLYIFVPDPTVGFLPNDAEELFIFLTEITEITIPCRVTDLPQLVVTLHEKKGDVALP

VPYDHQRGFGIFEDRSYICKTTIGDREVDSDAYYVYRLQVSSINVSVNAVQTVVR  
QGENITLMCIVIGNEVVNFEWTYPRKESGRLVEPVTDFLLDMPYHIRSILHIPSAELE  
DSGTYTCNVTESVNDHQDEKAINITVVESGYVRLLGEVGTLLQFAELHRSRTLQVV  
FEAYPPPTVLWFKDNRTLGDSSAGEIALSTRNVSETRYVSELTLVRVKVAEAGHYT  
5 MRAFHEDA EVQLSFQLQINVPVRVLELSESHPDSGEQTVRCRGRGMPQPNIWSAC  
RDLKRCPRELPPTLLGNSSEESQLETNVTYWEEEQEFEVVSTLRLQHVDRLSVR  
CTLRNAV GQDTQEVIVVPHSLPFKVVISAILALVVLTIISLILIMLWQKKPRYEIR  
WKVIESVSSDGHEYIYVDPMQLPYDSTWELPRDQLVLGRTLGSAGFGQVVEATAH  
GLSHSQATMKVAVKMLKSTARSEKQALMSELKIMSHLGPLNVNLLGACTKG  
10 GPIYITEYCRYGDLVDYLHRNKHTFLQHHS DKRRPPSAELYSNALPVGLPLPSHVS  
LTGESDGGYMDMSKDESVDYVPMLDMKGDVKYADIESSNYMAPYDNYVPSAPE  
RTCRATLINESPVLSYMDLVGFSYQVANGMEFLASKNCVHRDLAARNVLICEGKL  
VKICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLSDVWSFGILLWEI  
FTLGGTPYPELPMNEQFYNAIKRGYRMAQPAHASDEIYEIMQKCWEEKFEIRPPFS  
15 QLVLLLERLLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVL  
YTAVQPNEGDNDYIPLPDPKPEVADEGPLEGSPSLASSTLNEVNTSSTISCDSPLEP  
QDEPEPEPQLELQVEPEPELEQLPDSGCPAPRAEAEDSFL

SEQ ID No:79 (ENSG00000144840)

20 MASLDRVKVLVLGDSGVGKSSLVHLLCQNQVLGNPSWTVGCSVDVRVHDYKEG  
TPEEKTCYIELWDVGGSVGSASSVKSTRAVFYNSVNGIIFVHDLTNKKSSQNLRRW  
SLEALNRDLVPTGVLVTNGDYDQEQFADNQIPLL VIGTKLDQIHETKRHEVLTTTA  
FLAEDFNPEEINLDCTNPRYLAAGSSNAVKLSRFFDKVIEKRYFLREGNQIPGFPDR  
KRFGAGTLKSLHYD

25

SEQ ID No:80 (PTK7)

MGAARGSPARPRRLPLLSVLLLPLLGGTQTAIVFIKQPSSQDALQGRRALLRCEVE  
APGPVHVYWLLDGAPVQDTERRFAQGSSLSFAAVDPLQDSGTFQCVARDDVTGE  
EARSANASFNIKWIEAGPVVLKHPASEAEIQPQTQVKLRCHIDGHPRPTYQWFRDG  
30 TPLSDGQSNHTVSSKERNLTLRPAGPEHSGLYSCCAHSQACSSQNFTLSIADES  
FARVVLAPQDVVVAR YEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRRAT  
VFANGSLLLQVRPRNAGIYRCIGQGQRGPPILLEATLHLAEIEDMPLFEPRVFTAGS



EERVTCCLPPKGLPEPSVWWEHAGVRLPTHGRVYQKGHELVLANIAESDAGVYTC  
HAANLAGQRRQDVNITVATVPSWLKKPQDSQLEEGKPGYLDCLTQATPKPTVVW  
YRNQMLISEDSEFEVFKNGTLRINSVEVYDGTWYRCMSSTPAGSIEAQAQVLQVLE  
KLKFTPPPQPQQCMGFDKEATVPCSATGREKPTIKWERADGSSLPEWVTDNAGTL  
5 HFARVTRDDAGNYTCIASNGPQGQIRAHVQLTVAVFITFKVEPERTTVYQGHTAL  
LQCEAQGDPKPLIQWKGKDRILDPTKLGPRMHIFQNGSLVIHDVAPEDSGRYTCIA  
GNSCNIKHTEAPLYVVDKPVPEESEGPGSPPPYKMIQTIGLSVGAAVAYIIA VLGLM  
FYCKKRCKAKRLQKQPEGEPEMECLNGGPLQNGQPSAEIQEEVALTSLGSGPAA  
TNKRHSTSDKMHFPRSSLQPITTLGKSEFGEVFLAKAQGLEEGVAETLVLVKSLQS  
10 KDEQQQLDFRRELEMFGKLNHANVVRLGLCREAPHYMVLEYVDLEDLKQFLR  
ISKSKDEKLKSQPLSTKQKVALCTQVALGMEHLSNNRFVHKDLAARNCLVSAQR  
QVKVSALGLSKDVYNSEYYHFRQAWVALRWMSPEAILEGDFSTKSDVWASGVL  
MWEVFTHGEMPHGGQADDEVLADLQAGKARLPQPEGCP SKLYRLMQRCWALSP  
KDRPSFSEIASALGDSTVDSKP

15

SEQ ID No:81 (FLJ13977)

MRRLTRRLVLPVFGVLWITVLLFFWVTKRKLEVPTGPEVQTPKPSDADWDDLWD  
QFDERRYLNAKKWRVGDDPYKLYAFNQRESERISSNRAIPDTRHLSVLNRTPTHLI  
REIILVDDFSNDPDDCKQLIKLPKVKCLRNNERQGLVRSRIRGADIAQGTTLTFLDS  
20 HCEVNRDWLQPLLHRVKEDYTRVVCVIDIINLDTFTYIESASELRGGFDWSLHFQ  
WEQLSPEQKARRLDPTPIRTPIIAGGLFVIDKAWFDYLGKYDMDMDIWGGENFEI  
SFRVWMC GGSLEIVPCSRVGHVFRKKHPYVFPDGNANTYIKNTKRTAEVWMDEY  
KRYYYAARPFALERPFGNVESRLDLRKNLRCQSFKWYLENIYPELSIPKESSIQKGN  
IRQRQKCLESQANGTTGSSGQRPAGGTSEIWVQKPRVRNRRHAAPQGFDPGAKPS  
25 QHWRRPEHPAAE

SEQ ID No:82 (FLJ20481)

MFFSMGFIVA VKGKIASPLEAPVFVAAPHSTFFDGIACVVAGLPSMVSRNENAQVP  
LIGRLLRAVQPVLVSRVDPDSRKNTINEIIRTTSGGEWPQILVFPEGTCTNRSCLIT  
30 FKPGAFIPGVPVQPVLLRYPNKLDTVTWTWQGYTFIQLCMLTFCQLFTKVEVEFM  
PVQVPNDEEKNDPVLFANKVRNLMAEALGIPVTDHTYEDCRLMISAGQLTLPMEA  
GLVEFTKISRKLKLDWDGVRKHLDEYASIASSSKGGRIGIEEFAKYLKLPVSDVLR

QLFALFDRNHDGSIDFREYVIGLAVLCNPSNTEEIQVAFKLFDVDEDGYTTEEEFST  
ILQASLGVPDL DVSGLFKELAQGDSISYEEFKSFALKHPEYAKIFTTYLDLQTCHVFS  
LPKEVQTTTPSTASNKVSPEKHEESTSDKKDD

5 SEQ ID No:83 (SERPINA1)

MPSSVSWGILLLAGLCCLVPVSLAEDPQGDAQAQKTDTSHHQDHPTFNKITPNLA  
EFAFSLYRQLAHQSNSTNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPE  
AQIHEGFQELLRTL NQPDSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTV  
NFGDTEEAKKQINDYVEKGTQGKIVDLVKELDRDTVFALVNYIFFKGKWERPFEV  
10 KDTEEDFHVDQVTTVKVPMMKRLGMFNIQHCKKLSSWVLLMKYLG NATAIFFL  
PDEGKLQHLENELTHDIITKFLENEDRRSASLHLPKLSITGT YDLKSVLGQLGITKV  
FSNGADLSGVTEEAPLKL SKAVHKA VLTIDEKGTEAAGAMFLEAIPMSIPPEVKFN  
KPFVFLMIEQNTKSPLFMGKV VNPTQK

15 SEQ ID No:84 (FLJ22390)

MRPRRPHQIADLFRPKDQIAYS DTS PFLILSEASLADLNSRLEKKVKATNFRPNIVIS  
GCDVYAEDSWDELLIGDVELKRVMACSRCILTTVD PDTGVMSRKEPLETLKSYRQ  
CDPSEKLYGKSPLFGQYFVLENPGTIKV GDPVYLLGQ

20 SEQ ID No:85 (SIM TO Y71H10A. 2.P.)

MVSIPEYYEGKNVLLTGATGFLGKV LLEKLLRSCPKVNSVYVLVRQKAGQTPQER  
VEEVLSGKLFDRLRDENPDFREKIIAINSELTQPKLALSEEDKEVIDSTNIIFHCAAT  
VRFNENLRDAVQLNVIATRQLILLAQQMK NLEVF MHVSTAYAYCNRKHIDEVVY  
PPPVDPKKLIDSLEWMDDGLVNDITPKLIGDRPNTYIYTKALAEYVVQQEGAKLN  
25 VAIVRPSIVGASWKEPFGWIDNFNGPSGLFIAAGKGILRTIRASNNALADLVPVDV  
VVNMSLAAAWYSGVNRPRNIMVYNCTTGSTNPFHWGEVEYHVISTFKRNP LEQA  
FRRPNVNLT SNHLLYHYWIAVSHKAPAFLYDIYLRMTGRSPRCP SFKFN SNLSHH  
YRKGVS HRVSALLLDCTHVDRSETATFNIDVRQLHWA EYIENYCLGTKKYVLNEE  
MSG LPAARKHLNKT LFSLFHTALCHGKLTFVDDTFGFPCLLASGGPLLSVSLH FSA  
30 YVYSQIHLAFILRDLGSHSAPSLASLAGPRELTVGSLLDREWRQIKTDDFELGKSAG  
EVDLEGADIEGCLLATSPAVRQQALLQRGVQWYISIPTTQETVAMEMQI

SEQ ID No:86 (Hyptothetical protein tyrosine phosphatase ensg00000149185)

MAATALLEAGLARVLFYPTLLYTLFRGKVPGRAHRDWHYHRIDPTVLLGALPLRSL  
TRQLVQDENVRGVITMNEEYETRFLCNSSQEWKRLGVEQLRLSTVDMTGIPTLDN  
LQKGVQFALKYQSLGQCVYVHCKAGRSRSATMVAAAYLIQVHKWSPEEAVRAIAK  
5 IRSYHIRPGQLDVLKEFHKQITARATKDGTFFVISKT

SEQ ID No:87 (ICAM-2)

MSSFGYRTLTVLALFTLICCPGSDEKVFEVHVVRPKKLAVEPKGSLEVNCSTTCNQPE  
VGGLTSLNKKILLDEQAQWKHYLVSNISHDTVLCCHFTCSGKQESMNSNVSVYQP  
10 PRQVILTLQPTLVAVGKSFTIECRVPTVEPLDSLTLFLFRGNETLHYETFGKAAPAP  
QEATATFNSTADREDGHRNFSCLAVLDLMSRGGNIFHKHSAPKMLEIYEPVSDSQ  
MVIIIVTVVSVLLSLFVTSVLLCFIFGQHLRQQRMGTYGVRAAWRRLPQAFRP

SEQ ID No:88 (KIAA1181)

15 ASGEWRVSGGRPAGAGRPEEALAAGSDPRGAAARLACSAPTPGGGTMPFDFRRF  
DIYRKVPKDLTQPTYTGAISICCCCLFILFLFLSELTGFITTEVVNELYVDDPDKDSGG  
KIDVSLNISLPNLHCELVGLDIQDEMGRHEVGHIDNSMKIPLNNGAGCRFEGQFSIN  
KVPGNFHVSTHSATAQPQNPDMTVHKL SFGDTLQVQNIHGAFNALGGADRLTS  
NPLASHDYILKIVPTVYEDKSGKQRYSYQYTVANKEYVAYSHTGRIIPAIWFRYDL  
20 SPITVKYTERRQPLYRFITTICAIIGGTFTVAGILDSCIFTASEAWKKIQLGKMH

SEQ ID No:89 (KIAA1533)

NSKKMQSWYSMLSPTYKQRNEDFRKLFSKLPEAERLIVDYSCALQREILLQGRLY  
LSENWICFYSNIFRWETTISIQLKEVTCLKKEKTAKLIPNAIQICTESEKHFFTSFGAR  
25 DRCFLIFRLWQNALLEKTLSPRELWHLVHQCYGSELGLTSEDEDYVSPLQLNGL  
GTPKEVGDVIALSDITSSGAADRSQEPPVGSRRGHVTPNLSRASSDADHGAEEDK  
EEQVDSQPDASSQTVTPVAEPPSTEPTQPDGPTTLGPLDLLPSEELLTDTSNSSSST  
GEEADLAALLPDLSGRLLINSVFHVGAERLQQMLFSDSPFLQGFLQQCKFTDVTLS  
PWGDSKCHQRRVLTYPISNPLGPKSASVVETQTLFRRGPQAGGCVDSEVLTO  
30 GIPYQDYFYTAHRYCILGLARNKARLRVSSEIRYRKQPWSLVKSLIEKNSWSGIED  
YFHHLERELAKAEKLSLEEGGKDARGLLSGLRRRKRPLSWRAHGDGPQHPDPDPC  
ARAGIHTSGSLSSRFSEPSVDQGPAGIPSALVLISIVSLIILIALNVLLFYRLWSLERT

AHTFESWHSALAKGKFPQTATEWAEILALQKQFHSVEVHKWRQILRASVELLDE  
MKFSLEKLHQGITVSDPPFDTQPRPDDSF

SEQ ID No:90 (kinectin 1 (kinesin receptor))

5 MEFYESA YFIVLIPSI VITVIFLFFWL FMKETLYDEV LAKQKREQ KLIPTKTDK KKA  
KKKNKKKEIQNGNLHESDSES VPRDFKLSDALAVEDDQVAPVPLNVVETSSSVRE  
RKKKEKKQKPVLEE QVIKESDASKIPGKKVEPVVTKQPTPPSEAAASKKKPGQK  
KSKNGSDDQDKK VETLMVPSKRQEALPLHQETKQESGSGKKASSKKQKTENVFV  
DEPLIHATTYIPLMDNADSSPVVDKREVIDLLKPDQVEGIQKSGTKKLKTETDKEN  
10 AEVKFKDFLLSLKTMMFSEDEALCVVDLLKEKSGVIQDALKKSSKGELTTLIHQLO  
EKDKLLAAVKEDAAATKDRCKQLTQEMMTEKERSNVVMTRMKDRIGTLEKEHN  
VFQNKIHVS YQETQQMQMKFQQVREQMEAEIAHLKQENGILRDAVSNTTNQLES  
KQSAELNKL RQDYARLVNELTEKTGKLQQEEVQKKNAEQAATQLKVQLQEAERR  
WEEVQS YIRKRTAEHEAAQQDLQSKFVAKENEVQSLHSLTDTLVSKQQLEQRL  
15 MQLMESEQKR VNKEESLQMQVQDILEQNEALKAQIQQFHSQIAAQT SASVLA EEL  
HKVIAEKDKQIKQTEDSLASERDRLTSKEEELKDIQNMNFLKAEVQKLQALANE  
QAAAAHELEKMQQS VYVKDDKIRLL EEQLQHEISNKMEEFKILNDQNKALKSEVQ  
KLQTLVSEQPNKD VVEQMEKCIQEKDEKLKTVEELLE TGLIQVATKEEELNAIRTE  
NSSLTKEVQDLKAKQNDQVSFASLVEELKKVIHEKDGKIKSVEELLEAELLKVAN  
20 KEKTVQDLKQEIKALKEEIGNVQLEKAQQLSITSKVQELQNLLKGKEEQMNTMKA  
VLEEKEKDLANTGKWLQDLQEENESLKAHVQEVAQHNLKEASSASQFEELEIVLK  
EKGNELKRLEAMLKERESDLSSKTQLLQDVQDENKLFKSQIEQLKQQNYQQASSF  
PPHEELLKVISEREKEISGLWNELDSLKDAVEHQRRKKNNDLREKNWEAMEALAST  
EKMLQDKVNKTSKERQQQVEAVELEAKEVLKKLFPKVSVPNSLSYGEWLHGFEK  
25 KAKECMAGTSGS EEVKVLEHKLKEADEMHTLLQLECEKYKSVLAETEGILQKLQ  
RSVEQEENKWKVKVDESHKTIKQMSSFTSSEQELERLRSENKD IENLRREREHLE  
MELEKAEMERSTYVTEVRELKDLLTELQKKLDDSYSEAVRQNEELNLLKAQLNET  
LTKLRTEQNERQKVAGDLHKAQQSLELIQSKIVKAAGDTTVIENS DVSPETESSEK  
ETMSVSLNQT VTLQQLLQAVNQQLTKEKEHYQVLE

30

SEQ ID No:91 (Mesenchymal stem cell protein DSCD75)

MLGLLVALLALGLAVFALLDVWYLVRLPCAVLRARLLQPRVRDLLAEQRFPGRV  
LPSDLDLLLHMNNARYLREADFARVAHLTRCGVLGALRELRAHTVLAASCARHR  
RSLRLLEPFVRTRLLGWDDRAFYLEARFVSLRDGFVCALLRFRQHLLGTSPERVV  
QHLCQRRVEPPELPADLQHWISYNEASSQLLRMESGLSDVTKDQ

5

SEQ ID No:92 (Neurotrypsin)

MTLARFVLALMLGALPEVVGFDSVLNDSLHHSRHSPPAGPHYPPYYLPTQQRPT  
TRPPPPLPRFPRPPRALPAQRPHALQAGHTPRPHPWGCPAGEPWVSVTDFGAPCLR  
WAEVPPFLERSPPASWAQLRGQRHNFCSRPDGAGRPWCFYGDARGKVDWGYCD  
10 CRHGSVRLRGGKNEFEGTVEVYASGVWGTVCSSHWDDSDASVICHQLQLGGKGI  
AKQTPFSGGLIPIYWSNVRCRGDEENILLCEKDIWQGGVCPQKMAAAVTCSFSH  
GPTFPIRLAGGSSVHEGRVELYHAGQWGTVCDDQWDDADADEVICRQLGLSGIAK  
AWHQA YFGEGSGPVMLDEV RCTGNELSIEQCPKSSWGEHNCGHKEDAGVSCTPL  
TDGVIRLAGGKGSHEGRLEVYYRGQWGTVCDDGWTELNTYVVC RQLGFKY GKQ  
15 ASANHFEESTGPIWLDDVSCSGKETRFLQCSRRQWGRHDCSHREDVSIACYPGGE  
GHRLSLGFPVRLMDGENKKEGRVEVFINGQWGTICDDGWTDKDAAVICRQLGYK  
GPARARTMA YFGEGKGPIHVDNVKCTGNERSLADCIKQDIGRHNCRHSEDAGVIC  
DYFGKKASGNSNKESSLSSVCGLRLLHRRQKRIIGGKNSLRGGWPWQVSLRLKSSH  
GDGRLLCGATLLSSCWVLTAAHCFKRYGNSTRSYAVRVGDYHTLVPEEFEEEEIGV  
20 QQIVIHREYRPDRSDYDIALVRLQGPEEQCARFSSHVLPACLPLWRERPQKTASNC  
YITGWGDTGRAYSR TLQQA AIPLLPKRFCEERYKGRFTGRMLCAGNLHEHKRVDS  
CQGDSSGGLMCERPGESWVVGVT SWGYGCGVKDSPGVYTKVSAFVPWIKSVT  
KL

25 SEQ ID No:93 (PP1, regulatory subunit 15B)

MEPGTGGSRKRLGPRAGFRFWPPFFPRRSQAGSSKFPTPLGPENSGNPTLLSSAQPE  
TRVSYWTKLLS QLLAPLPGLLQKVLIWSQLFGGMFPTRWLDFAGVYSALRALKGR  
EKPAAPTAQKSLSSLQLDSSDPSVTSPLDWLEEGIHQYSPDDLKLELKAKGSALD  
PAAQAFLEQQLWGV ELLPSSLQSRLYSNRELGSSPSGPLNIQRIDDFS VVS YLLNP  
30 SYLDCFPRLEVSYQNSDGNSEVVGFQTLTPESSCLREDHCHPQPLSAELIPASWQG  
CPPLSTEGLPEIHHLRMKRLEFLQQASKGQDLTPDQDNGYHSLEEEHSLLRMDPK  
HCRDNPTQFVPAAGDIPGNTQESTE EKI ELLTTEVPLALEEESPSEGCPSS EIPMEKE

PGEGRISVVDYSYLEGDLPIARPACSNKLIDYILGGASSDLETSSDPEGEDWDEEA  
EDDGFDSDSSLSDSDLEQDPEGLHLWNSFCSDPYNPQNFTATIQTAAARIVPEEPSD  
SEKDLSGKSDLENSSQSGSLPETPEHSSGEEDDWESSADEAESLKLWNSFCNSDDP  
YNPLNFKAPFQTSGENEKGCRDSKTPSESIVAISECHTLLSCKVQLLGSQESECPDS  
5 VQRDVLSGGRHITHVKRKKVTFLEEVTEYYISGDEDRKGPWEEFARDGCRFQKRIQ  
ETEDAIGYCLTFEHRERMFNRLQGTCFKGLNVLKQC

SEQ ID No:94 (Protein amplified in osteosarcoma (OS-9))

MAAETLLSSLLGLLLLGLLLLPASLTGGVGS LNLEELSEMRYGIEILPLPVMGGQSQS  
10 SDVVIVSSKYKQRYECRLPAGAIHFQREREEETPAYQGPGIPELLSPMRDAPCLLKT  
KDWWTYEFCYGRHIQQYHMEDSEIKGEVLYLGYYSQAFDWDDetakaskQHRL  
KRYHSQTYGNGSKCDLNGRPREA EVRFLCDEGAGISGDYIDRVDEPLSCSYVLTIR  
TPRLCPHPLLRPPPSAAPQAILCHPSLQPEEYMA YVQRQADSKQYGDKIEELQDLG  
PQVWSETKSGVAPQKMAGASPTKDDSKDSDFWKMLNEPEDQAPGGEEVPAEEQ  
15 DPSPEAADSASGAPNDFQNNVQVKVIRSPADLIRFIEELKGGTKKGKPNIGQEQPV  
DDAAEVPQREPEKERGDPERQREMEEEDEDEDEDEDERQLLGEFEKELEGILL  
PSDRDRLRSEVKAGMERELENIIQETEKELDPDGLKKESERDRAMLALTSTLNKLI  
KRLEEKQSPELVKKHKKKRVVPKKPPSPQPT EEDPEHRVRVRVTKLRLGGPNQD  
LTVLEMKRENPKLQKQIEGLVKELLEREGLTAAGKIEIKIVRPWAEGTEEGARWLTD  
20 EDTRNLKEIFFNILVPGAEEAQKERQRQKELESNYRRVWGSPGGEGTGDLDEFDF

SEQ ID No:95 (Protein similar to stromal cell-derived factor 2)

MAVVPLLLLGLWSAVGASSLGVVTCGSVVKLLNTRHNVRLHSHDVRYGSGSGQ  
QSVTGVTSVDDSNSYWRIRGKSATVCERGTPIKCGQPIRLTHVNTGRNLHSHHFTS  
25 PLSGNQEVS AFGEEGEDYLDDWTVLCNGPYWVRDGEVRFKHSSTEVLSSVTGE  
QYGRPISGQKEVHGMAQPSQNNYWKAMEGIFMKPSELLKAEAHHAEL

SEQ ID No:96 (Protocadherin beta 8)

MEASGKLICRQRQVLFSLLLGLSLAGAAEPRSYSVVEETEGSSFVTNLAKDLGLE  
30 QREFSRRGVRVVS RGNKLHLQLNQETADLLLNEKLDREDLCGHTEPCVLR FQVLL  
ESPFEFFQ AELQVIDINDHSPVFLDKQMLVKVSESSPPGTAFPLKNAEDLDIGQNNI  
ENYIISPNSYFRVLTRKRS DGRKYPELVLDNALDREEEAELRLTLTALDGGSPPRSG

TAQVYIEVVDVNDNAPEFQQPFYRVQISEDSPISFLVVKVSATDVDTGVNGEISYSL  
FQASDEISKTFKVDFLTGEIRLKKQLDFEKFQSYEVNIEARDAGGFSGKCTVLIQVI  
DVNDHAPEVTMSAFTSPIPENAPETVVALFSVSDLDSENGKISCSIQEDLPFLKSS  
VGNFYTLLTETPLDRESRAEYNVTITVTDLGTPLTTHLNMTVLVSDVNDNAPFT  
5 QTSYTLFVRENNSPALHIGSVSATDRDSGTNAQVTYSLPPQDPHLPLASLVSINTD  
NGHLFALRSLDYEALQAFEFRVGASDRGSPALSSEALVRVLVLDANDNSPFVLYPL  
QNGSAPCTELVPRAAEPGYLVTKVVAVDGDSGQNAWLSYQLLKATEPGLFGVW  
AHNGEVRTARLLSERDAAKQRLVVLVKDNGEPPCSATATLHLLLVDGFSQPYLPL  
PEAAPAQGGADSLTVYLVVALASVSSLFLFSVLLFVAVLLCRRSRAASVGRCVPE  
10 GPFPGHLVDVRGTGSLSQNYQYEVCLAGGSGTNEFQFLKPVLPNIQGHSGPEME  
QNSNFRNGFGFSLQLK

SEQ ID No:97 (REP8 protein)

MASRGVVGIFFLSAVPLVCLLRRGIPDIGIKDFLLLCGRILLALLTLISVTTSWL  
15 NSFKSPQVYLKEEEEKNEKRQKLVRKKQQEAQGEKASRYIENVLKPHQEMKLRK  
LEERFYQMTGEAWKLSSGHKLGGDEGTSQTSFETSNREAAKSQNLKPLTEFPSPA  
EQPTCKEIPDLPEEPSQTAEVVTVALRCPSGNVLRRLFLKSYSSQVLFDMTRIG  
YHISLYSLSTSFPRLPLAVEGGQSLEDIGITVDTVLILEEKEQTN

20 SEQ ID No:98 (RING finger protein 5)

MAAAEEEDGGPEGPNRERGGAGATFECNICLETAREA VVSVCGLHYCWPC LHQW  
LETRPERQECVPCKAGISREKVPLYGRGSQKPQDPRLKTPPRPQGQRPAPESRGG  
FQPFGDTGGFHFSFGVGAFPGFFTTVFNAHEPFRRGTGVDLGQGH PASSWQDSL  
LFLAIFFFFWLLSI

25

SEQ ID No:99 (Retinal short-chain dehydrogenase/reductase retSDR2)

MKFLLDILLLLPLLIVCSLESFVKLFIPKRRKSVTGEIVLITGAGHGIGRLTAYEFAKL  
KSKLVLDINKHGLEETAACKCKGLGAKVHTFVVDCSNREDIYSSAKKVKA EIGD  
VSILVNNAGVVYTSDFATQDPQIEKTFEVNVLAHFWTTKAFLPAMTKNNHGHV  
30 TVASAAGHVSVFLLAYCSSKFAAVGFHKTLTDELAALQITGVKTTCLCPNFVNT  
GFIKNPSTSLGPTLEPEEVNRLMHGILTEQKMIFIPSSIAFLTTLERILPERFLAVLK  
RKISVKFDAVIGYKMQAQ

SEQ ID No:100 (Stromal cell-derived factor 2-like 1)

MWSAGRGGAAWPVLLGLLLALLVPGGGAAKTGAELVTCGSVLKLLNTHHRVRL  
HSHDIKYGSGSGQQS VTGVEASDDANSYWRIRGGSEGGCPCGSPVRCGQAVRLTH  
5 VLTGKNLHTHHFPSPLSNNQEVSAFGEDGE GDDLDLWTVRCSGQHWEREAAVRL  
QHVGTSVFLSVTGEQYGSPIRGQHEVHGMPSANTHNTWKAMEGIFIKPSVEPSAG  
HDEL

SEQ ID No:101 (Thioredoxin domain-containing protein)

10 GRWASGEMAPSGSLAVPLAVLVLLWLGAPWTHGRRSNVRVITDENWRELLEGD  
WMIEFYAPWCPACQNLQPEWESFAEWGEDLEVNIKVDVTEQPGLSGRFITALPT  
IYHCKDGEFRRYQGPRTKKDFINFISDKEWKSIEPVSSWFGPGSVLMSSMSALFQLS  
MWIRTCHNYFIEDLGLPVWGSYTVFALATLFSGLLLGLCMIFVADCLCPSKRRRPQ  
PYPYPSKKLLSESAQPLKKVEEEQEADEEDVSEEEAESKEGTNKDFPQNAIRQRS  
15 GPSLATDKS

SEQ ID No:102 (Voltage-dependent anion channel 1)

AVPPTYADLGKSARDVFTKGYGFGLIKLDLKTKE SENGLEFTSSGSANTETTKVTGS  
LETKYRWTEYGLTFTEKWNTDNTLGTEITVEDQLARGLKLTFDSSFSPNTGKKNA  
20 KIKTGYKREHINLGCDMDFDIAGPSIRGALVLGYEGWLAGYQMN FETAKSRVTQS  
NFAVG YKTDEFQLHTNVNDGTEFGGSIYQKV NKKLETA VNLA WTAGNSNTRFGI  
AAKYQIDPDACFSAKVNNSSLIGLGYTQTLKPGIKLTSALLDGKNVNAGGHKLG  
LGLEFQA

25 SEQID No:103 (ATP-binding cassette, sub-family A member 3)

MAVLRQLALLLWKNYTLQKRKVLVTVLELFLPLLFPGLIWLRLKIQSENVPNATI  
YPGQSIQELPLFFTFPPPGDTWELAYIPSHSDAAKTVTETVRRALVINMRVRGFPSE  
KDFEDYIRYDNCSSSVLAAVVFEHPPFNHSKEPLPLAVKYHLRFSYTRRNYMWTQT  
GSFFLKETEGWHTTSLFPLFPNPGPRELTSPDGGEPGYIREGFLAVQHAVDRAIME  
30 YHADAATRQLFQRLTVTIKRFYPYPFIADPFLVAIQYQLPLLLLLLSFTYTALT IARAV  
VQEKERRLKEYMRMMGLSSWLHWSAWFLLFFLFLLLIAASFMTLLFCVKVKPNVA  
VLSRSDPSLVLAFLLCFAISTISFSFMVSTFFSKANMAAAF GGFLYFFTYIPYFFVAP



RYNWM TLSQKLCSCLLSNVAMAMGAQLIGKFEAKGMGIQWRDLLSPVNVDDDF  
CFGQVLGMLLLDSVLYGLVTWYMEAVFPGQFGVPQPWYFFIMPSYWCGKPRAV  
AGKEEEDSDPEKALRNEYFEAEPEDLVAGIKIKHLSKVFRVGNKDRAAVRDLNLN  
LYEGQITVLLGHNGAGKTTTLSMLTGLFPPTSGRAYISGYEISQDMVQIRKSLGLCP  
5 QHDILFDNLTVAEHL YFYAQLKGLSRQKCPEEVKQMLHIIGLEDKWNRSRFLSG  
GMRRKLSIGIALIAGSKVLILDEPTSGMDAISRRAIWDLLQRQKSDRTIVLTTHFMD  
EADLLGDRIAIMAKGELQCCGSSLFLKQKYGAGYHMTLVKEPHCNPEDISQLVHH  
HVPNATLESSAGAELSFLPRESTHRFEGLFAKLEKKQKELGASFGASITTMEEVFL  
RVGKLVDSMDIQAIQLPALQYQHERRASDWA VDSNLCGAMDPSDGIGALIEEER  
10 TAVKLNTGLALHCQQFWAMFLKKAAYSWREWKMVAAQVLVPLTCVTLALLAIN  
YSSELFDDPMLRLTLGEYGR TVVPFSVPGTSQLGQQLSEHLKDALQAEGQEPREV  
LGDLEEFLIFRASVEGGGFNERCLVAASFRDVGERTVVNALFNNQAYHSPATALA  
VVDNLLFKLLCGPHASIVVS NFPQPRSA LQAAKDQFNEGRKGF DIALNLLFAMAFL  
ASTFSILAVSERAVQAKHVQFVSGVHVASFWSALLWDLISFLIPSLLLL VVFKAFD  
15 VRAFTRDGHMADTLLLLLLYGWAIPLMYLMNFFFLGAATAYTRLTIFNILSGIATF  
LMVTIMRIPAVKLEELSKTLDHVFLVLPNHCLGMAVSSFYENYETR RYCTSSEVA  
AHYCKKYNIQYQENFYAWSAPGVGRFVASMAASGCAYLILLFLIETNLLQRLRGIL  
CALRRRRTLTELYTRMPVLPEDQDVADERTRILAPSPDSLLHTPLIKELSKVYEQR  
VPLLAVDRLSLAVQKGECFLLGFNGAGKTTTTFKMLTGEESLTSGDAFVG GHRIS  
20 DVGKVRQRIGYCPQFDALLDHMTGREMLVMYARLRGIPERHIGACVENTLRGLLL  
EPHANKLVRTYSGGNKRKLSTGIALIGEPAVIFLDEPSTGMDPVARRLLWDTVARA  
RESGKAJITSHSMEECEALCTRLAIMVQGQFKCLGSPQHLKSKFGSGYSLRAKVQS  
EGQQEAL EEFKAFVDLTFPGSVLEDEHQGMVHYHLPGRDLSWAKVFGILEKAKE  
KYGVDDYSVSQISLEQVFLSFAHLQPPTAE EGR

25

SEQID No:104 (CAMK4)

MLKVTVPSCSASSCSSVTASAAPGTASLVDPDYWIDGSNRDALSDFFEVESELGRGA  
TSIVYRCKQKGTQKPYALKVLKKTVDKKIVRTEIGVLLRLSHPNIIKLKEIFETPTEI  
SLVLELVTGGELFDRIVEKGYYSERDAADAVKQILEAVAYLHENGIVHRDLKPEN  
30 LLYATPAPDAPLKIADFGLSKIVEHQVLMKTVCGTPGYCAPEILRGCAYGPEVDM  
WSVGIIITYILLCGFEPFYDERGDQFMFRRILNCEYYFISPWWDEVSLNAKDLVRKLI  
VLDPKKRLTTFQALQHPWVTGKAANFVHMDTAQKKLQEFNARRKLKAAVKAVV

ASSRLGSASSSHGSIQESHKASRDPSPIQDGNEDMKAIPERGEKIQGDGAQAAVKGA  
QAELMKVQALEKVKGADINAEAPKMVPKAVEDGIKVADLELEEGLAEEKLKTV  
EEAAPREGQGSSAVGFVPPQDVLPEY

5 SEQ ID No:105 (KIAA0363)

EPCALTPGPSHLALTFLPSKPGARPQPEGASWDAGPGGAPSAWADPGEGGPPSPML  
LPEGLSSQALSTEAPLPATLEPRIVMGEETCQALLSPRAARTALRDQEGGHASPDPP  
PELCSQGDLSVPSPPPDPDSFFTPPSTPTKTTYALLPACGPHGDARDSEAELRDELL  
DSPPASPSGSYTTADGDSWASSPSCSLSLAPAEGLDFPSGWGLSPQGSMDEREL  
10 HPAGTPEPPSSESSLADSSSSWGQEGHFFDLDFLANDPMIPAALLPFQGSILFQVE  
AVEVTPLSPEEEEEEAVADPDPGGDLAGEGEEDSTSASFLLQSLSDLSITEGMDEAFA  
FRDDTSAASSDSDSASYAEADDERLYSGEPHAQATLLQDSVQKTEESGGGAKGL  
QAQDGTVSWAVEAAPQTSDRGAYLSQRQELISEVTEEGLALGQESTATVTPHTLQ  
VAPGLQVEVATR VTPQAGEEETDSTAGQESAAMAMPQPSQEGISEILGQESVTAE  
15 KLTPQEETSLTLCPSQNLKEEGGLDLPSGRKPVAAATIVPRQAKEDLTLPQDSA  
MTPPLPLQDSDLSSAPKPVAAATIVSQQAEEGLTLPQDSVMTPLPLQDTELSSAPK  
PVAAATLVSQQAEEGLTLPQDSAMTPPLPLQDSDLSSAPKPVAAATLVSQQAEEG  
LTLPQDSAMTPPLPLQDSDLSSAPKPVAAATLVSQQAEEGLTLPQDSAMTPPLPLQ  
DSDLSSAPKPVAAATIVSQQAEEGLTLPQDSAMTPPLPLQDSDLSSAPKPVAAATI  
20 VSQQAEEGLTLPQDSAMTPPLPLQDSDLSSAPKPVAAATPVVSQQAEEGLTLPQDSA  
MTPPLPLQDSDLSSAPKPVAAATPVVSQQAEEGLTLPQDSAMTAPLPLQDTGPTSGP  
EPLAVATPQTLQAEAGCAPGTEPVATMAQQEVGEALGPRPAPEEKNAALPTVPEP  
AALDQVQQDDPQPAEAGTPWAAQEDADSTLGMEALSLPEPASGAGEEIAEALSR  
PGREACLEARAHTGDGAKPDSPQKETLEVENQQEGGLKLLAQEHGPRSALGGAR  
25 EVPDAPPAACPEVSQARLLSPAREERGLSGKSTPEPTLPSAVATEASLDSCPESSVG  
AVSSLDRGCPDAPAPTSAPTSQQPEPVLGLGSVEQPHEVPSVLGTPLLQPPENLAK  
GQPSTPVDRPLGPDPSAPGTLAGAALPPLEPPAPCLCQDPQEDSVEDEEPPGSLGLP  
PPQAGVQPAAAAVSGTTQPLGTGPRVSLSPHSPLSPKVASMDAKDLALQILPPCQ  
VPPSPGPQSPAGPQGLSAPEQQEDEDSEEDSPRALGSGQHSDSHGESSAELDEQDI  
30 LAPQTVQCPAQAPAGGSEETIAKAKQSRSEKKARKAMSKLGLRQIQGVTRITIQKS  
KNILFVIAKPDVFKSPASDTYVVFGEAKIEDLSQQVHKAAAEEKFKVPSEPSALVPES

APRPRVRLECKEEEEEEEEEEVDEAGLELRDIELVMAQANVSRAKAVRALRDNHSD  
IVNAIMELTM

SEQID No:106 (DCTN1)

5 MMRQAPTARKTTTTRPKPTRPASTGVAGASSSLGPSGSASAGELSSSEPSTPAQTP  
LAAPIPTPVLTSFGAVPPLPSPSKEEEGLRAQVRDLEEKLETTLRLKRAEDKAKLKE  
LEKHKIQLEQVQEWKSKMQEQQADLQRRLEKEARKEAKEALEAKERYMEEMADT  
ADAIEMATLDKEMAEERAESLQQEVEALKERVDELTTDLEILKAEIEEKGSDDGAAS  
SYQLKQLEEQNARLKDALVRMRDLSSEKQEHVKLQKLMEKKNQELEVVRQQRE  
10 RLQEELSQAESTIDELKEQVDAALGAEEMVEMLTDRNLNLEEKVRELRETVGDLE  
AMNEMNDELQENARETELELREQLDMAGARVREAAQKRVEAAQETVADYQQTIK  
KYRQLTAHLQDVNRELTNQQEASVERQQQPPPETFDKIKFAETKAHAKAIEMEL  
RQMEVAQANRHMSLLTAFMPDSFLRPGGDHDCVLVLLMPRLICKAELIRKQAQ  
EKFELSENCSERPGLRGAAGEQLSFAAGLVYSLSLLQATLHRYEHALSQCSVDVY  
15 KKVGSLYPEMSAHERSLDFLIELLHKDQLDET VNVEPLTKAIKYYQHLYSIHLAEQ  
PEDCTMQLADHIKFTQSALDCMSVEVGRLRAFLQGGQEATDIALLLRDLETSCSDI  
RQFCKKIRRRMPGTDAPGIPAALAFGPQVSDTLDCRKHLTWVVAVLQEVA AAA  
AQLIAPLAENEGLLVAALEELAFKASEQIYGTPSSSPYECLRQSCNLISTMKNLAT  
AMQEGEYDAERPPSKPPVELRAAALRAEITDAEGLGLKLEDRETVIKELKKS LKI  
20 KGEELSEANVRLSLLEKKLDSA AKDADERIEKVQTRLEETQALLRKKEKEFEETM  
DALQADIDQLEAEKAELKQRLNSQSKRTIEGLRGPPPSGIATLVSGIAGEEQQRGAI  
PGQAPGSVPGPLVKDSPLLLQQISAMRLHISQLQHENSILKGAQM KASLASLPPL  
HVAKLSHEGPGSELPAGALYRKTSQ LLETNLQLSTHTHVVDITRTSPA AKSPSAQL  
MEQVAQLKSLSDTVEKLKDEV LKETVSQRPGATVPTDFATFPSSAFLRAKEEQQD  
25 DTVYMGKVTFSCAAGFGQRHRLVLTQEQLHQLHSRLIS

SEQ ID No:107 (KIAA1250)

LQLSVKMSVLISQSVINYVEEENIPALKALLEKCKDVDERNECGQTPLMIAAEQGN  
LEIVKELIKNGANCNLEDLDNWTALISASKEGHVHIVEELLKCGVNLEHRDMGGW  
30 TALMWACYKGRTDVV ELLLSHGANSVVTGLYSVYPTIWAAGRGHADIVHLLLQN  
GAKVNCSDKYGTTPLVWAARKGHLECVKHLLAMGADV DQEGANSMTALIVAV  
KGGYTQSVKEILKRNPVNLTDKDGNTALMIASKEGHTEIVQDLLDAGTYVNIPD

RSGDTVLIGAVRGGHVEIVRALLQKYADIDIRGQDNKTALYWAVEKGNATMVRD  
ILQCNPDTEICTKDGETPLIKATKMRNIEVVELLLDKGAKVSAVDKKGDTPLHIAIR  
GRSRKLAELLLRNPKDGRLLYRPNKAGETPYNIDCSHQKSILTQIFGARHLSPTETD  
GDM LGYDLYSSALADILSEPTMQPPICVGLYAQWGS GKSFLKKLEDEMKT FAGQ  
5 QIEPLFQFSWLIVFLTLLLCGGLGLLFAFTVHPNLGIAVSL SFLALLYIFFIVTYFGGR  
REGESWNWAWVLSTRLARHIGYLELLLLKLMFVNPPPELPEQTTKALPVRFLFTDYN  
RLSSVGGETSLAEMIATLSDACEREFGLATRLFRVFKTEDTQGKKKWKKTCCCLPS  
FVIFLFIIGCIISGITLLAIFRVDPKHLTVNAVLSIASVVGLAFVLNCR TWWQVLD SL  
LNSQRKRLHNAASKLHKLKSEGF MKVLKCEVELMARMAKTIDSFTQNQTRLV VII  
10 DGLDACEQDKVLQMLDTVRVLFSKGPFLAIFASDPHIIKAINQNLNSVLRDSNING  
HDYMRNIVHLPVFLNSRGLSNARKFLVTSATNGDVPCSDTTGIQEDADRRVSQNS  
LGEMTKLGSKTALNRRDTYRRRQMQR TITRQMSFDLTKLLVTE DWFS DISPQ TMR  
RLLNIVSVTGRLLRANQISFNWDR LASWINLTEQWPYRTSWLILYLEETEGIPDQM  
TLKTTYERISKNIPTTKDVEPLLEIDGDIRNFEVFLSSRTPVLVARDVKVFLPCTVNL  
15 DPKLREIIADVRAAREQISIGGLAYPPLPLHEGPPRAPSGYSQPPSVCSSTS FN GPFA  
GGVVSPQPHSSYYSGMTGPQH PFYNRPF FAPYLYTPRYYPGGSQH LISRPSVK TSL  
PRDQNNGLEVIKEDAAEGLSSPTDSSRGSGPAPGPVLLNSLNVDAVCEK LKQIEG  
LDQSM LPQYCTTIKKANINGRVL AQCNIDELKKEMNMNFGDWHLFRSTVLEM RN  
AESHVVPEDPRFLSESSSGPAPHGEPARRASHNELPHTELSSQTPYTLNFSFEELNTL  
20 GLDEGAPRHSNLSWQSQTRRTPSLSSLNSQDSSIEISKLT DKVQAEYRDAYREYIAQ  
MSQLEGGPGSTTISGRSSPHSTYYMGQSSSGGSIHSNLEQEKGKDSEPKPDDGRKSF  
LMKRGDVIDYSSSGVSTNDASPLDPITEEDEKSDQSGSKLLPGKKSSERS SLFQTDL  
KLKGSGRLRYQKLPSDEDESGTEESDNTPLLKDDKDRKAEGKVERVPKSPEHSAEPI  
RTFIKAKEYLSDALLDKKDSSDSGVRSSSESPNHSLHNEVADDSQLEKANLIELED  
25 DSHSGKRGIPHSLSLGLQDPHARM SICSSEDKKSPSECSLIASSPEENWPACQKAYNLN  
RTPSTVTLNNSAPANRANQNFD EMEGIRETSQVILRPSSSPNPTTIQ NENLKSMTH  
KRSQRSSYTRL SKDPPELHAAASSESTGFGEERESIL

SEQID No:108 (FACL3)

30 MNNHVSSKPSTMKLKHTINPILLYFIHFLISLYTILTYIPFYFFSES RQEKS NR IKA KP  
VNSKPDSAYRSVNSLDGLASVLYPGCDTLDKVFTYAKNKFKNKRL LGTREV LNEE  
DEVQPNGKIFKKVILGQYNWLSYEDVFVRAFNFGNGLQMLGQKPKTNIAIFCETR

AEWMIAAQACFMYNFQLVTLYATLGGAIVHALNETEVTNIITSKELLQTKLKDIV  
SLVPRLRHITVDGKPPTWSDFPKGIIVHTMAAVEALGAKASMENQPHSKPLPSDIA  
VIMYTSGSTGLPKGVMISHSNIIAGITGMAERIPELGEEDVYIGYLPLAHVLELSAEL  
VCLSHGCRIGYSSPQTLADQSSKIKKGSKGDTSMLKPTLMAAVPEIMDRIYKNVM  
5 NKVSEMSSFQRNLFILAYNYKMEQISKGRNTPLCDSFVFRKVRSLGNGNIRLLLCG  
GAPLSATTQRFMNICFCCPVGGYGLTESAGAGTISEVWDYNTGRVGAPLVCCEI  
KLKNWEEGGYFNTDKPHPRGEILIGGQSVTMGYKNEAKTKADFSEDENGQRWL  
CTGDIGEFEPDGCLKIIDRKKDLVKLQAGEYVSLGKVEAALKNLPLVDNICAYANS  
YHSYVIGFVVPNQKELTELARKKGLKGTWEELCNSCEMENEVLKVLSEAAISASL  
10 EKFEIPVKIRLSPEPWTPETGLVTDFAFKLRKELKTHYQADIERMYGRK

SEQID No:109 (FACL4)

MKLKLNVLTIILLPVHLLITYSALIFIPWYFLTNAKKKNAMAKRIKAKPTSDKPGSP  
YRSVTHFDSLAVIDIPGADTLDKLFDAVSKFGKKDSLGTREILSEENEMQPNGKV  
15 FKKLILGNYKWMNYLEVNRVNNFGSGLTALGLKPKNTIAIFCETRAEWMIAAQT  
CFKYNFPLVTLYATLGKEAVVHGLNESEASYLITSVELLESKLKTALLDISCVKHII  
YVDNKAINKAEYPEGFEIHSMQSV EELGSNPENLGIPPSRPTPSDMAIVMYTSGSTG  
RPKGVMHHSNLIAGMTGQCERIPGLGPKDTYIGYLPLAHVLELTAEISCFTYGCR  
IGYSSPLTSLDQSSKIKKGSKGDCTVLKPTLMAAVPEIMDRIYKNVMSKVQEMNYI  
20 QKTLFKIGYDYKLEQIKKGYDAPLCNLLLFFKKVKALLGGNVNRMMLSGGAPLSPQT  
HRFMNVCFCCPIGQGYGLTESCGAGTVTEVTDYTTGRVGAPLICCEIKLDWQEG  
GYTINDKPNPRGEIVIGGQNISMGYFKNEEKTAEDYSVDENGQRWFCTGDIGEFHP  
DGCLQIIDRKKDLVKLQAGEYVSLGKVEAALKNCPLIDNICAFKSDQSYVISFVV  
PNQKRLTLLAQQKGVEGTWVDICNNPAMEAEILKEIREAANAMKLERFEIPIKVRL  
25 SPEPWTPETGLVTDFAFKLRKELRNHYLKDIERMYGGK

SEQID No:110 (KIAA0095)

MDTEGFGELLQQAELAAETEGISELPHVERNQLQEIQQAGERLRSRTLRTSQETA  
DVKASVLLGSRGLDISHISQRLESLSAATTFEPELPVKDIDIQGFLKNEKDNALLSAI  
30 EESRKRTFGMAEEYHRESMLVEWEQVKQRILHTLLASGEDALDFTQESEPSYISDV  
GPPGRSSLDNIEMAYARQIYTYNEKIVNGHLQPNLVDLCASVAELDDKSIDMWT  
MVKQMTDVLTPATDALKNRSSVEVRMEFVRQALAYLEQSYKNYTLVTVFGNL

HQAQLGGVPGTYQLVRSFLNIKLPAPLPGLQDGEVEGHPVWALIYYCMRCGDLLA  
ASQVVNRAQHQLGEFKTWFEYMNSKDRRLSPATENKLRLHYRRALRNNTDPY  
KRAVYCIIGRCDVTDNQSEVADKTEDYLWLKLNQVCFDDDDGTSSPQDRLTLSQFQ  
KQLLEDYGESHTVNQQPFLYFQVLFLTAQFEAAVAFLFRMERLRCHAVHVALVL  
5 FELKLLLKSSGQSAQLLSHEPGDPPCLRRLLNFVRLMLYTRKFESTDPREALQYFY  
FLRDEKDSQGENMFLRCVSELVIESREFDMILGKLENDGSRKPGVIDKFTSDTKPII  
NKVASVAENKGLFEEAAKLYDLAKNADKVLELMNKLLSPVVPQISAPQSNKERL  
KNMALSIAERYRAQGISANKFVDSTFYLLLDLITFFDEYHSGHIDRAFDIERLKLVP  
LNQESVEERVAAFRNFSDEIRHNLSEVLLATMNILFTQFKRLKGTSPSSSSSRPQRVIE  
10 DRDSQLRSQARTLITFAGMIPYRTSGDTNARLVQMEVLMN

SEQID No:111 (KIAA0922)

MLLVLECVLFSVAQGYFRMDSSATQFHIETHENTSGLWSIWYRNHFDRSVVLNDV  
FLSKETKHMLKILNFTGPLFLPPGCWNIFSLKLA VKDIAINLFTNVFLT TNIGAI FAIP  
15 LQIYSAPTKEGSLGFEVIAHCGMHYFMGKSKAGNPWNWNGSLSLDQSTWNVDSEL  
ANKLYERWKKYKNGDVCKRNVLGTTTFAHLKKSKESESFVFFLPRLIAEPGLMLN  
FSATALRSRMICYFVVQNPSSWPVSLQLLPLSLYPKPEALVHLLHRWFGTDMQMI  
NFTTGEFQLTEACPYLGTHSEESRFGILHLHLQPLEMKRVGVVFTPADYGKVTSLIL  
IRNNLTVIDMIGVEGFGARELLKVGGRLLPGAGGSLRFKVPESTLMDCRRQLKDSK  
20 QILSITKNFKVENIGPLPTVSSLKINGYNQCQGYGFEVLDCHQFSLDPNTSRDISIVFT  
PDFTSSWVIRDL SLVTAADLEFRFTLNVTLP HLLPLCADVVPGPSWEESFWRLTV  
FFVSLSLLGVILIAFQQAQYILMEFMKTRQRQNASSSSQQNNGPMDVISPHSYKSN  
CKNFLDTYGPSDKGRGKNCLPVNTPQSRIQNAAKRSPATYGHSSQKKHKCSVYYS  
KHKTSTAAASSTSTTTEEKQTSPLGSSLPAKEDICTDAMRENWISLRYASGINVNL  
25 QKNLTLPKNLLNKEENTLKNITVFSNPSSECSMKEGIQT CMFPKETDIKTSENTA EF  
KERELCPLKTSKKLPENHLPRNSPQYHQPDLP EISRKNNGNNQQVPVKNEVDHCE  
NLKKVDTKPSSEKKIHKTSREDMFSEKQDIPFVEQEDPYRKKKLQEKREGNLQNL  
NWSKSRTCRKNKKRGVAPVSRPPEQSDLKLVCSDFERSELSSDINVRSWCIQESTR  
EVCKADAELASSLPAAQREAEGYYQKPEKKCVDFKFCSDSSSDCGSSSGSVRASRG  
30 WGSWSSTSSSDGDKKPMVDAQHFLPAGDSVSQNDFPSEAPISLNL SHNICNPMTV  
NSLPQYAEPSCPSLPAGPTGVEEDKGLYSPGDLWPTPPVCVTSSLNCTLENGVPCVI  
QESAPVHNSFIDWSATCEGQFSSAYCPLLELNDYNAPPEENMNYANGFPCPADVQT

DFIDHNSQSTWNTPPNMPAA WGHASFISSPPYLTSTRSLSPMSGFLFGSIWAPQSDV  
YENCCPINPTTEHSTHMENQAVVCKEYYPGFNPFRA YMNLDIWTTTANRNANFPL  
SRDSSYCGNV

5 SEQ ID No:112 (PAS domain containing serine/threonine kinase)

MEDGGLTAFEEDQRCLSQSLPLPVSAEGPAAQTAEPSRSFSSAHRHLSRRNGLSR  
LCQSRTALSEDRWSSYCLSSLAAQNICTSKLHCPAAPEHTDPSEPRGSVSCCSLLRG  
LSSGWSSPLLPAVPCNPNKAIFTVDAKTTEILVANDKACGLLGYSSQDLIGQKLTQ  
FFLRSDSDVVEALSEEHMEADGHAAVVF GTVVDIISRSGEKIPVSVWMKRMQRER  
10 RLCCVVVLEPVERVSTWVAFQSDGTVTSCDSLFAHLHGYVSGEDVAGQHITDLIPS  
VQLPPSGQHIPKNLKIQRSVGRARDGTTFPLSLKLKSQPSSEEATTGEAAPVSGYRA  
SVWVFCTISGLITLLPDGTHGINHSFALTIFGYGKTELLGKNITFLIPGFYSYMDLA  
YNSSLQLPDLASCLDVGNESGCGERTLDPWQQQDPAEGGQDPRINVVLAGGHVV  
PRDEIRKLMESQDIFTGTQTELIAGGQLLSCLSPQAPGV DNVPEGSLPVHGEQALP  
15 KDQQITALGREEPVAIESPGQDLLGESRSEPVDVKPFASCEDSEAPVPAEDGGSDA  
GMCGLCQKAQLERMGVSGPSGSDLWAGAAVAKPQAKGQLAGGSLLMHCPCYGS  
EWGLWWRSQDLAPSPSGMAGLSFGTPTLDEPWLG VENDORREELQTCLIQUELSQLS  
LAGALDVPHAELVPTECQAVTAPVSSCDLGGRDLCGGCTGSSSACYALATDLP GG  
LEAVEAQEVDVNSFSWNLKELFFSDQTDQTSSNCSCATSELRETPSSLA VGSDDPDV  
20 GSLQEQGSCVLDDRELLLLTGTCVDLGQGRRFRESCVGHDPTEPLEVCLVSSEHY  
AASDRESPGHVPSTLDAGPEDTCPSAEEPRLNQVTSTPVIVMRGAAGLQREIQEG  
AYSGSCHHRDGLRLSIQFEVRRVELQGPTPLFCCWL VKDLLHSQRDSAARTRLFLA  
SLPGSTHSTAAELTGPSLVEVLRARPWFEEPPKA VELEGLAACEGEYSQKYSTMSP  
LGSGAFGFVWTAVDKEKNKEVVVKFIKKEKVLED CWIEDPKLGKVTLEIAILSRV  
25 EHANIIVLDIFENQGFFQLVMEKHGSGLDLFAFIDRHPRLDEPLASYFRQLVSAV  
GYLRLKDIIHRDIKDENVIAEDFTIKLIDFGSAA YLERGKLFYTFCTIEYCAPEVL  
MGNPYRGPELEMWSLGVTLTYTLVFEENPFCELEETVEAAIHPPYLVS KELMSLVSG  
LLQPVPERRTTLEKLV TDPWVTQPVNLADYTWEEVCRV NKPESGVLSAASLEMG  
NRSLSDVAQAQELCGGPVPGEAPNGQGCLHPGDPRLLTS

30

SEQID No:114 (homolog of yeast golgi membrane protein yif1p (yip1p-interacting factor)  
HPAGLAAAAAGTPRLPSKRRI PVSQGMADPHQLFDDTSSAQS RGYGAQRAPGGL

SYPAASPTPHAFLADPVSNMAMAYGSSSLAAQGKELVDKNIDRFIPITKLKYYFA  
VDTMYVGRKLGLLFFPYLHQDWEVQYQQDTPVAPRFDVNAPDLYPAMAFITYV  
LVAGLALGTQDRFSPDLLGLQASSALAWLTLEVLAILLSLYLVTVNTDLTTIDLVA  
FLGYKYVGMIGGVLMGLLFGKIGYYLVLGWCCVAIFVFMIRTLRLKILADAAAEG  
5 VPVRGARNQLRMYLTMAVAAAQPMLMYWLTFFHLVR

SEQ ID No:114 (Integral membrane transporter protein)

MVNYAWAGRSQRKLWWRSAVLTCCKSVVRPGYRGGLQARRSTLLKTCARARA  
TAPGAMKMVAPWTRFYNSNCCCLCHVRTGTILLGVWYLIINAVVLLILLSALADP  
10 DQYNFSSSELGGDFEFMDDANMCIAIAISLLMILICAMATYGAYKQRAAWIIPFFC  
YQIFDFALNMLVAITVLIYPNSIQEYIRQLPPNFPYRDDVMSVNPTCLVLIILLFISIIL  
TFKGYLISCWNCYRYINGRNSSDVLVYVTSNDTTVLLPPYDDATVNGAAKEPPP  
PYVSA

15 SEQ ID No:115 (GPR49)

MDTSRLGVLLSLPVLLQLATGGSSPRSGVLLRGCPTHCHCEPDGRMLLRVDCSDL  
GLSELPSNLSVFTSYLDLSMNNISQLLPNPLPSLRFLLEELRLAGNALTYIPKGAFGL  
YSLKVLMLQNNQLRHVPTEALQNLRLSLQSLRLDANHISYVPPSCFSGHSLRHLW  
LDDNALTEIPVQAFRSLALQAMTLALNKHHPDYAFGNLSSLVVLHLHNNRIHSL  
20 GKKCFDGLHSLETDLNYYNNLDEFPTAIRTLNLKELGFHSNNIRSIPEKAFVGNPS  
LITHFYDNPIQFVGRSAFQHLPELRTLTLNGASQITEFPDLTGATANLESLTLTGAQIS  
SLPQTVCNQLPNLQVLDLSYNLLEDLPSFSVCQKLQKIDLRHNEIYEIKVDTFQQLL  
SLRSLNLAWNKAIIHPNAFSTLPSLIKLDLSSNLLSSFPITGLHGLTHLKLTKGNHAL  
QSLISSENFPELKVIEMPYAYQCCAFGVCENAYKISNQWNKGDNSSMDDLHKKDA  
25 GMFQAQDERDLEDFLDFFEDLKALHSVQCSPSPGPFKPCHELLDGLWLRIGVWTI  
AVLALTCNALVTSTVFRSPYISPIKLLIGVIAAVNMLTGVSSAVLAGVDAFTFGSF  
ARHGAWWENGVGCHVIGFLSIFASESSVFLTLAALERGFSVKYSAKFETKAPFSS  
LKVIILLCALLALTMAAVPLLGGSKYGASPLCLPLPFGEPTMGYMVALILLNSLCF  
LMMTIAYTKLYCNLDKGDLENTWDCSMVKHIALLLFTNCILNCPVAFLSFSSLINLT  
30 FISPEVIKFIILLVVVPLPACLNPLLYILFNPHFKEDLVSLRKQTYVWTRSKHPSLMSI  
NSDDVEKQSCDSTQALVTFTSSSITYDLPPSSVPSPAYPVTESCHLSSVAFVPCL



SEQ ID No:116 (NAP-1 related protein/NAP-1-like protein)

KEQSELDQDLDDVEEVVEEETGEETKLKARQLTVQMMQNPQILAALQERLDGLV  
ETPTGYIESLPRVVKRRVNALKNLQVKCAQIEAKFYEEVHDLERKYAVLYQPLFD  
KRFEIINAIYEPTEECEWKPDEEDEISEELKEKAKIEDEKKDEEKEDPKGIPEFWLT  
5 VFKNVDLLSDMVQEHDEPILKHLKDIKVKFSDAGQPMSEFVLEFHFEPNEYFTNEVL  
TKTYRMRSEPDDSDPFSFDGPEIMGCTGCQIDWKKGKNVTLKTIKKKQKHKGRT  
VRTVTKTVSNDSFFNFFAPPEVIPKFSAFDDDAEAILAADFEIGHFLRERIIPRSVLYF  
TGEAIEDDDDDYDEEGEEADEGYQLFEEVKSCSKLFQRWLQ

10 SEQID No:117 (SPTLC2)

MRPEPGGCCCRRTVRANGCVANGEVRNGYVRSSAAAAAAAAAAGQIHVVTQNGG  
LYKRPFNEAFEETPMLVAVLTYVGYGVLTFLGYLRDFLRYWRIEKCHHATEREEQ  
KDFVSLYQDFENFYTRNLYMRIRDNWNRPICSVPGARVDIMERQSHDYNWSFKY  
TGNIIKGVINMGSYNYLGFARNTGSCQEAAAKVLEEYAGAVCSTRQEIGNLDKHE  
15 ELEELVARFLGVEAAMAYGMGFATNSMNIPALVGKGCLILSDELNHASLVLGARL  
SGATIRIFKHNNMQSLEKLLKDAIVYGQPRTRRPWKKILILVEGIYSMEGSIVRLPE  
VIALKKKYKAYLYLDEAHSIGALGPTGRGVVEYFGLDPEDVDVMMGTFTKSFGA  
SGGYIGGKKELIDYLRTHSHSAVYATSLSPVVEQIITSMKCMGQDGTSLGKECV  
QQLAENTRYYFRRRLKEMGFIIYGNEDSPVPLMLYMPAKIGAFGREMLKRNIGVV  
20 VVGFPATPIESRARFCLSAAHTKEILD TALKEIDEVGDLLQLKYSRHRLVPLDRPF  
DETTYEETED

SEQID No:118 (Delta-like homolog)

MTATEALLRVLLLLLAFGHSTYGAECFPACNPQNGFCEDDNVCRCQPGWQGPLC  
25 DQCVTSPGCLHGLCGEPGQCICTDGWDGELCDRDVRACSSAPCANNGTCVSLDG  
GLYECSCAPGYSGKDCQKKDGPCVINGSPCQHGGTCVDDEGRASHASCLCPPGFS  
GNFCEIVANSCTPNPCENDGVCTDIGGDFRCRCPAGFIDKTCSRPTVNCASSPCQN  
GGTCLQHTQVSYECLCKPEFTGLTCVKKRALSPQQVTRLPSGYGLAYRLTPGVHE  
LPVQQPEHRILKVS MKELNKKTPLLTEGQAICFTILGVLTSLVVLGTVGIVFLNKCE  
30 TWVSNLRYNHMLRKKKNLLLQYNSGEDLAVNIIFPEKIDMTTFSKEAGDEEI

SEQ ID No: 119 (25 kDa microsomal signal peptidase subunit)

MAAAAVQGGRSGGSGGCSGAGGASNCGTGSGRSGLLDKWKIDDKPVKIDKWDG  
SAVKNSLDDSAKKVLLEKYKYVENFGLIDGRLTICTISCFFAIVALIWDYMHPFPES  
KPVLAALCVISYFVMMGILTIYTSYKEKSIFLVAHRKDPTGMDPDDIWQLSSSLKRF  
DDKYTLKLTIFISGRTKQQREAEFTKSIKFFDHSGTLVMDAYEPEISRLHDSLAIER  
5 KIK

SEQ ID No: 120 (APP-C99)

MDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGGVVIATVIVITLVMLKK  
KQYTSIHGTVVEVDAAVTPEERHLSKMQQQNGYENPTYKFFEQMQN

10

SEQ ID No: 121 (Psen-2)

MLTFMASDSEEEVCDERTSLMSAESPTPRSCQEGRQGPEDGENTAQWRSQENEED  
GEEDPDRYVCSGVPGRPPLGLEEELTLKYGAKHVIMLFVPVTLCMIVVVATIKSVRF  
YTEKNGQLIYTPFTEDTPSVGQRLNLSVLNTLMISVIVVMTIFLVVLYKYRCYKFI  
15 HGWLIMSSMLLFLFTYIYLGEVLKTYNVAMDYPTLLLTVWNFGAVGMVCIHWK  
GPLVLQQAYLIMISALMALVFIKYLPEWSAWVILGAISVYDLVAVLCPKGPLRML  
VETAQERNEPIFPALYSSAMVWTVGMAKLDPSSQGALQLPYDPEMEEDSYDSFG  
EPSYPEVFEPPLTGYPGEELEEEEEERGVLGLGDFIFYSVLVGKAAATGSGDWNTT  
LACFVAILIGLCLTLLLLAVFKKALPALPISITFGLIFYFSTDNLVRPFMDTLASHQL

20 YI

SEQ ID No: 122 (FADS1)

MGTRAARPAG LPCGAENPAR RRLALGARQQ IHSWSPRTPS TRLTAPAGPA  
RGVARPAMAP DPVAAETAAQ GPTPRYFTWD EVAQRSGCEE RWLVIDRKVY  
25 NISEFTRRHP GGSRVISHYA GQDATDPFVA FHINKGLVKK YMNSLLIGEL  
SPEQPSLEPT KNKELTDEFR ELRATVERMG LMKANHVFLL LYLLHILLE  
GAAWLTLWVF GTSFLPFLLC AVLLSAVQAQ AGWLQHDFGH LSVFSTSKWN  
HLLHHFVIGH LKGAPASWWS HMHFQHHAKP NCFRKDPDIN MHPFFFALGK  
ILSVELGKQK KKYMPYNHQH KYFFLIGPPA LLPLYFQWYI FYFVIQRKKW  
30 VDLAWMITFY VRFFLTYPVL LGLKAFLGLF FIVRFLESNW FVWVTQMNI  
PMHIDHDRNM DWVSTQLQAT CNVHKSAFND WFSGHLNFQI EHHLFPTMPR  
HNYHKVAPLV QSLCAKHGIE YQSKPLLSAF ADIHSCLKES GQLWLDAYLH Q

SEQ ID No: 123 (DEGS)

MGSRVSREDF EWVYTDQPHA DRRREILAKY PEIKSLMKPD PNLIWIIIMM  
VLTQLGAFYI VKDLDWKWVI FGAYAFGSCI NHSMTLAIHE IAHNAAFGNC  
5 KAMWNRWFGM FANLPIGIPY SISFKRYHMD HHRYLGDGV DVDIPTDFEG  
WFFCTAFRKF IWVILQPLFY AFRPLFINPK PITYLEVINT VAQVTFDILI  
YYFLGIKSLV YMLAASLLGL GLHPISGHFI AEHYMFLKGH ETYSYYGPLN  
LLTFNVGYHN EHHDFPNIPG KSLPLVRKIA AEYYDNLPHY NSWIKVLYDF  
VMDDTISPYS RMKRHQKGEM VLE

10

SEQ ID No: 124 (SCD4/ HYPOTHETICAL PROTEIN FLJ21032)

MPGPATDAGK IPFCDAKEEI RAGLESSEGG GGPFRPGARG QRQNTVWRNV  
VLMSLLHLGA VYSLVLIPKA KPLTLLWAYF CLLLAALGVT AGAHLRWSHR  
SYRAKLPLRI FLAVANSMAF QNDIFERSRD HRAHHKYSET DADPHNARRG  
15 FFFSHIGWLF VRKHRDVIEK GRKLDVTDLL ADPVVRIQRN TQHIQKEGRA  
LNQEAACEML REWHQGHILK VTLPLGLHILA LLHTHCNHSE KCCLMLRALS  
VSLEVF

SEQ ID No: 125 (FADS3)

20 MGGVGEPGPR EGPAQPGAPL PTFCWEQIRA HDQPGDKWL V IERRVYDISR  
WAQRHPGGSR LIGHHGAEDA TDAFRAFHQD LNFVRKFLQP LLIGELAPEE  
PSQDGPLNAQ LVEDFRALHQ AAEDMKLFDA SPTFFAFLG HILAMEVLAW  
LLIYLLGPGW VPSALAAFIL AISQAQSWCL QHDLGHASIF KKSWWNHVAQ  
KFVMGQLKGF SAHWWNFRHF QHHAKPNIFH KDPDVTVPV FLLGESSVEY  
25 GKKKRRYLPY NQQHLYFFLI GPPLTLVNF EVENLAYMLV CMQWADLLWA  
ASFYARFFLS YLPFYGVPGV LLFFVAVRVL ESHWFVWITQ MNHIPKEIGH  
EKHRDWVSSQ LAATCNVEPS LFTNWFSGHL NFQIEHHLFP RMPRHNYSRV  
APLVKSLCAK HGLSYEVKPF LTALVDIVRS LKKSGDIWLD AYLHQ

30